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ABSTRACT

This issue includes the following articles: "Towards a Sociolinguistics of Style" (Alan Bell, Gary Johnson); "Engendering Identities: Pronoun Selection as an Indicator of Salient Intergroup Identities" (Miriam Meyerhoff); "A Majority Sound Change in a Minority Community" (Carmen Fought); "Addressing the Actuation Question for Local Linguistic Communities" (Lisa Ann Lane); "Typologizing the Sociolinguistic Speech Community" (Otto Santa Ana and Claudia Parodi); "Symbolic Identity and Language Change: A Comparative Analysis of Post-Insular /ay/ and /aw/" (Natalie Schilling-Estes, Walt Wolfram); "The Geolinguistics of Sound Change in Progress: /l/ Vocalization in Australia" (Barbara M. Horvath, Ronald J. Horvath); "Urban Sound Change beyond the Cities: The Spread of the Northern Cities Chain Shift" (Matthew J. Gordon); "Dialect Contact, Focusing and Phonological Rule Complexity: The Koineisation of Fenland English" (David Britain); "Sociolinguistic Coherence of Changes in Standard Dialect" (J. K. Chambers); "Adaptive Sociophonetic Strategies and Dialect Accommodation: /ay/ Monophthongization in Cherokee English" (Bridget L. Anderson); "Phonetic Realization of Final Engma in Taipei Mandarin" (Fu-Dong Chiou); "Frequency Effects in Variable Lexical Phonology" (James Meyers, Gregory R. Guy); "Variation in the Nativization of Foreign [a] in English" (Charles Boberg); "Rule Inversion in British English Dialect: A Sociolinguistic Investigation of [r]-sandhi in Newcastle upon Tyne" (Paul Foulkes); "Optimality and the Syntax of Lectal Variation" (Rakesh M. Bhatt); "The Truth about Codeswitching in Insular Acadian" (Ruth King, Terry Nadasdi); "Empirical Analysis of Anti-Immigrant Metaphor in Political Discourse" (Otto Santa Ana); "Is There an Authentic African American Speech Community: Carla Revisited" (Lanita Jacobs-Huey); "Yorkville Crossing: A Case Study of the Influence of Hip-Hop Culture on the Speech of a White Middle Class Adolescent in New York City"

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(Cecilia A. Cutler); and "Modeling Contact-Induced Language Change" (Naomi Nagy). Tables, figures, charts, graphs, and references are included in individual articles. (KFT)

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## Volume 4.1 (1997)

## A Selection of Papers from NWAVE 25

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# Working Papers in Linguistics

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Edited by:

Charles Boberg, Miriam Meyerhoff, Stephanie Strassel
and the PWPL series editors

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## About the PWPL series

The *University of Pennsylvania Working Papers in Linguistics* (PWPL) is an occasional series produced by the Penn Linguistics Club, the graduate student organization of the Linguistics Department of the University of Pennsylvania. It aims to provide a forum for previously unpublished work, or work in progress, by linguists with an ongoing affiliation with the Department.

The current PWPL series editors are Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark and Alexander Williams.

This volume is the result of the combined efforts of many people. Papers were selected and reviewed for content under the direction of Charles Boberg, Miriam Meyerhoff, and Stephanie Strassel. Atissa Banuazizi did most of the leg work of collecting the papers, and the PWPL editors carried out the production of the actual volume. Special thanks are due to Hikyoung Lee for her production help, expert proofreading, and amazing post-its. All remaining errors are the responsibility of the series editors or the authors, as the case may be.

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## From the Editors

The 25th annual meeting of NWAVE (New Ways of Analyzing Variation) was hosted by Guy Bailey and Jan Tillery of the University of Nevada, Las Vegas in October 1996. During the conference, participants expressed some interest in putting out a selection of papers that were presented, along the lines of *(N)Waves and Means: a selection papers from NWAVE 24* (PWPL v. 3.1).

As in that PWPL volume, these papers are not conference proceedings. Practical constraints made a full proceedings impossible. Consequently, the selection of papers reflects to a greater or lesser extent the interests of the Editors and of the Penn sociolinguistics program. However, notwithstanding these limitations, we hope that the papers selected faithfully reflect the broad range of research in which NWAVE participants are engaged.

The papers are arranged thematically. The first paper, a plenary address by Bell, reviews recent work identifying addressee effects in the sociolinguistic variation of discourse particles. Meyerhoff critically examines the use of accommodation theory to account for addressee effects.

Next are four papers relating to one of the classic concerns of sociolinguistics: the definition and perception of the speech community. Fought deals with gang membership in the Los Angeles Chicano community, Lane looks at the construction of a speech community in Denmark, and Santa Ana & Parodi schematize the structure of speech communities using a Mexican exemplar. Wolfram & Schilling-Estes' paper extends their investigation of post-insular speech communities to a new location.

This last paper also exemplifies the increasing strength of research in social dialectology. A number of papers at NWAVE 25 used sociolinguistic methodology to approach the study of regional dialects: these include Horvath & Horvath (Australian English, with special emphasis on the intersection of geographical and sociolinguistic theory), Gordon (Northern Cities shift in Michigan), Britain (The Fens in the UK), Chambers (Canadian English), Anderson (Cherokee communities in North Carolina), and Chiou (phonological variation in Mandarin).

Much sociolinguistics is involved in the application of sociolinguistic research to general questions of theoretical linguistics. Greg Guy's work has been central to this area. In this volume, Myers & Guy test formal phonological models against

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data on t/d deletion. Boberg uses structural phonology to explain dialect differences in the nativization of foreign [a] in English, and Foulkes asks whether /r/ insertion is a purely phonological process or whether it, too, is sociolinguistically stratified. Bhatt demonstrates the use of Optimality Theory in syntactic variation, and King & Nadasdi examine syntactic and semantic constraints on code-switching in Canadian French. Santa Ana examines language variation within the framework of critical discourse analysis.

The tradition of work on AAVE is given a new perspective in papers by Jacobs-Huey and Cutler, who examine the transfer and use of AAVE features to non-African American speakers.

Finally, situations of language contact have long been a central interest of sociolinguistics, and this tradition is represented by Nagy's paper. If, as it seems, language contact is set to again become an important component in the study of language in society, this paper provides a template for making future studies maximally comparable.

Charles Boberg
Miriam Meyerhoff
Stephanie Strassel

# Towards a Sociolinguistics of Style[1]

Allan Bell and Gary Johnson

## 1. Introduction

The basic principle of language style is that an individual speaker does not always talk in the same way on all occasions. Style means that speakers have alternatives or choices—a '*that* way' which could have been chosen instead of a '*this* way'. Speakers talk in different ways in different situations, and these different ways of speaking can carry different social meanings.

The study of style has had a chequered career in sociolinguistics over the past 20 years, but is now attracting more interest again from variationists. That renewed interest can be dated from the work done by John Rickford & Faye McNair-Knox, as presented in a plenary paper to NWAVE in 1991. We concur with their assessment in the published version (1994: 52):

> With respect to theory development, stylistic variation seems to offer more potential for the integration of past findings and the establishment of productive research agendas than virtually any other area in sociolinguistics.

The work that we describe below has just such a goal.

Generalizing grossly, we can distinguish two main approaches to the study of style in sociolinguistics. The first, ethnographic approach—associated especially with Dell Hymes (e.g. 1974)—encompasses the many ways in which individual speakers can express themselves differently in different situations. This recognizes that style operates on the full range of linguistic levels—in the patterns of speaking across whole discourses and conversations as well as in the phonology or syntax. On the 'social' side, a wide range of factors that may affect the different ways an individual talks are taken into account—including purpose, topic, genre, channel and audience.

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[1] We acknowledge the support of the New Zealand Foundation for Research, Science & Technology in funding the study reported below as part of the New Zealand English Programme conducted in the Department of Linguistics, Victoria University of Wellington. Allan Bell is grateful to the Department for its hospitality (not always funded) over a period of years.

The second, variationist approach to style is much more strictly defined on both the social and linguistic dimensions. It was pioneered by Labov in his New York City study (1966, 1972) and has been followed and developed in countless studies in many countries in the subsequent 30-odd years. Variationist sociolinguistics has usually worked with micro aspects of linguistic structure—the alternation of specific phonological variants. It has also usually followed a tightly defined approach to the social dimension, in terms of particular demographic parameters such as gender or ethnicity.

So on the one hand we have a very broad-brush, 'maximalist' approach to both linguistic and social phenomena. And on the other, a much more rigorous attempt to control both the social and linguistic variables. Our approach in this paper and the work it reports on is in part an attempt to blend the two, in particular the quantitative rigour with the qualitative breadth.

## 2. The Gist of Audience Design

In a paper published in 1984, Bell developed the Audience Design framework which has had some currency since then as a sociolinguistic approach to style. Audience Design proposed that style shift occurs primarily in response to the speaker's audience. Its main contentions can be summarized thus:

1. Style is what an individual speaker does with a language in relation to other people.
2. Style derives its meaning from the association of linguistic features with particular social groups.
3. Speakers design their style primarily for and in response to their audience.
4. Audience design applies to all codes and levels of a language repertoire, monolingual and multilingual.

5. Variation on the style dimension within the speech of a single speaker derives from and echoes the variation which exists between speakers on the 'social' dimension.
6. Speakers have a fine-grained ability to design their style for a range of different addressees, as well as for other audience members.
7. Style shifting according to topic or setting derives its meaning and direction of shift from the underlying association of topics or settings with typical audience members.
8. As well as the 'responsive' dimension of style, there is the 'initiative' dimension, where the style shift itself initiates a change in the situation rather than resulting from such a change.
9. Initiative style shifts are in essence referee design, by which the linguistic features associated with a reference group can be used to express identification with that group.

These nine points have been enlarged upon elsewhere (Bell in press), and the last three in particular critiqued and revised. The basic premise of audience design is that style is oriented to people rather than to mechanisms such as attention. Style focuses on the person. It is essentially a social thing. It marks interpersonal and intergroup relations.

In initiative style shift, the individual speaker makes creative use of language resources often from beyond the immediate speech community, such as distant dialects, or stretches those resources in novel directions. With Bakhtin we may call this dimension 'stylization' (1981), and the responsive simply 'style'. Initiative style shifts derive their force and their direction of shift from their underlying association with types of persons or groups. Referees are third persons who are not physically present at an interaction but who are so salient for a speaker that they influence style even in their absence. This is the area where we believe audience design to be in need of serious rethinking. And this—along with an approach to blending the quantitative with the qualitative—is the second main goal of the project we are working on, and of this paper.

**Table 1** Grid for interviews with 4 informants each talking to 3 different interviewers

| | | INTERVIEWERS | | | |
|---|---|---|---|---|---|
| | | MM<br>Pine | MF<br>Pania | PM<br>Paul | PF<br>Jen |
| **INFORMANTS** | | | | | |
| MM | Duncan | 1st | 2nd | 3rd | — |
| MF | Kay | 2nd | 1st | — | 3rd |
| PM | Lee | 3rd | — | 1st | 2nd |
| PF | Sally | — | 3rd | 2nd | 1st |

Ethnicity: Maori Gender: Female
Pakeha (Anglo) Male

## 3. Designing Research on Style

We now turn to report on a study which was explicitly designed to test out several of the Audience Design hypotheses. It is a three-year project (just completed) which was funded by the New Zealand Foundation for Research, Science & Technology under the NZ English Programme at Victoria University of Wellington. The project examines and seeks to explain the ways speakers talk differently to different audiences, and how they present their own identities through language.

The language sample consists of three interviews conducted with each of four speakers. A set of four informants aged in their twenties were interviewed in succession by a set of four interviewers (Table 1). The informant and interviewer samples were each structured by gender and ethnicity, so that each of them contained a Maori[2] woman, Maori man, Pakeha woman and Pakeha man. Thus for example, the Maori man was interviewed first by the Maori male interviewer, second by the Maori woman, and third by the Pakeha man. The fourth possible combination of interviewers and informants was intentionally excluded (the practicalities of a fourth successive interview with each informant were prohibitive).

While gender and ethnicity were varied, other speaker characteristics were held as constant as possible:

- Age: all eight speakers were in their early to mid 20s.
- Social class: all were middle class, university educated.
- New Zealand origins: all were New Zealanders of several generations' standing.
- Degree of familiarity: all informants and interviewers were strangers to each other.

In addition, we tried to keep aspects of the setting constant.

- Interviews were conducted in the informants' own homes.
- No third parties were present.
- Interviewers were asked to dress in a similar and 'neutral' fashion (neither too formal nor too casual).

The attempt to hold factors constant extended to interview design as well. The elicitation of maximally informal speech had to be sacrificed to the need to ensure comparability across the interviews, e.g. by topic—one example of the different methodology needed for style research.

Three standardized questionnaires were designed, one for each of the three interviews conducted with each informant. Each interview consisted of four components: free conversation, set topics, reading tasks and other tasks. A basic principle of the interview design was to make aspects of the informant's identity salient at particular times. So the set topic for the second interview—the cross-gender combination—was gender, focussing the informants on their own gender identity and its contrast with the interviewers'. Similarly, the primary topic of discussion in the third, cross-ethnic interview was the issue of ethnic relations and identity in New Zealand.

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[2] Maori are the indigenous Polynesian inhabitants and now make up some 15 percent of the population. 'Pakeha' is the term for New Zealanders of mainly British origin who colonized the country from the 19th century (some 80 percent of the population).

This was an ambitious research design, particularly in its repeated interviews involving the same set of informants and interviewers. Recording failure or speaker withdrawal could have jeopardized the whole project, requiring location of fresh speakers and re-recording interviews in order to maintain the integrity of the design. However, all 12 interviews were completed despite this potential for disaster. The interviews averaged over an hour long each. They have been transcribed in full, timed, and their content logged under topic headings. The sample amounts to over 13 hours of taped interviews, about 650 pages of transcripts, and a total count of some 140,000 words.

## 4. The Discourse Features

The linguistic analysis we will report on covers a subset of the features often known as pragmatic markers—typically the sentence-final tags such as *I think* and *like* that we scatter like discoursal and interactive glue throughout our conversational encounters. Among these features there is a subset sometimes known as the 'addressee-oriented' pragmatic markers—you know, tag questions such as *isn't it*, and so forth. They have been studied in New Zealand by Janet Holmes and Maria Stubbe (e.g. Stubbe & Holmes 1995) in particular. The chief function of these features seems to be interactive, for the speaker to seek reassurance of the listener's continuing attention to what is being said, or confirmation of shared experience or knowledge.

The four features we shall look at here are: Y'KNOW, TAG questions, the discourse particle EH and High Rising Terminal intonations (HRTs). While Y'KNOW and TAGs need little introduction, the other two invite more discussion, partly because they are characteristic of NZE, although not exclusive to it.

The particle EH functions syntactically very much like Y'KNOW or TAGs. EH also occurs in other varieties of English—at least Canadian (e.g. Gibson 1976) and the dialect of Guernsey in the Channel Islands (Ramisch 1989). The leading study of EH in NZ English to date is Meyerhoff's (1994) analysis of the Porirua social dialect survey (Holmes, Bell & Boyce 1991). EH also carries considerable social meaning, which we will come to shortly. Transcript 1 comes from the interview between the two Maori men (pseudonyms used), and gives a sense both of the data in general, and also in particular of EH and its usage,

The High Rising Terminal (HRT) is not a pragmatic particle but an intonation pattern, however its discourse function is very similar. This intonation is becoming familiar in English internationally, both through usage, and because of research and publication. It is in common usage in New Zealand, where the leading study is by David Britain (1992), again on the Porirua data.

**Transcript 1** Duncan—EH clustering

| | |
|---|---|
| ( ) | unclear speech |
| = | continuation of turn or latching |
| // \\ | overlapping speech |

| | |
|---|---|
| *kohanga reo*: | language nest (preschool immersion class) |
| *kaupapa*: | philosophy, principles |

D: first we did Heretaunga and then er one a few um ko-
hanga reo from Poneke (yeah) and then a few from
Rangitane and we er got back to the to the um real kau-
papa of what kohanga reo is all about because it's becom-
ing a bit of a business now EH and they're losing the los-
ing what it's the real meaning of it //(YOU KNOW) it's\
for our children YOU KNOW=
I: /mm\\
D: =although a lot of the people in there EH they work
blimmin hard man and they get stuff all for it and some-
times you don't blame them EH 'cause they're getting no
rewards out of it //but um\ we're trying to (and then)=
I: /mm\\
D: =tha- that sort of thing EH er with kohanga reo there will
never be many rewards for the people working in it but

um YOU KNOW they've still got to keep up with that
original kaupapa of making sure our children are getting
taught the best they can yeah

**Transcript 2** Kay: clustering of High Rising Terminal tones
(| = HRT)

K: I remember oh I was about eleven or twelve and um we'd
been jumping off this bridge
I: yeah=/
K: /=into this um oh into the water below it and it was
a lagoon going out to the open SEA| and there was quite a
strong current taking all the water out //and\ um I'd dive=
I: /yeah\\
K: =bombed this GUY| and splashed him so he started racing
over to the road BRIDGE| and I was swimming back
against the current to the other side of the lagoon and um
my toes had just touched the GROUND|=/
I: /=yeah=/
K: /=and he jumped off the road bridge and hit me on my
SHOULDERS| and jarred my SPINE| and I was
PARALYSED| I couldn't move=/
I: /=God=/
K: /=and all I th- I
just thought YOU KNOW all I can do is try and float try
and float and just lie back and relax and try and float and
um I was going help me help me and Dad came out and
rescued me and blew up the kid [inhales] and um and
//then he found out I was\ you know I couldn't move for
about two days and then I was fine

Transcript 2 is a danger-of-death narrative from the interview between the two Maori women.

Initially we will present quantitative findings on the distribution of these features. But then we want to move on to what we consider to be a complementary approach, that is a more qualitative analysis of where the features occur on-line during speech and why, and also how the four features co-occur—or otherwise—with each other.

By way of orientation, we present in Table 2 the raw counts of the features, with no allowance for amount of talk or interview length. We can make some observations on the strength of these figures for tokens:

1. Y'KNOW is the feature of choice, especially for the Pakeha man Lee in expository mode. It appears to carry little identity meaning, although research would tend to associate it with women's style rather than men's.
2. But for the Pakeha woman Sally the default feature is the HRT, and she has remarkably few Y'KNOWs. (She also has some other individualistic preferences—e.g. always using KIND OF where the other three use SORT OF.)
3. Tags are infrequent but there is an indication that they are used more by Pakeha than Maori.

**Table 2** Number of tokens of 4 addressee-oriented pragmatic features in the speech of 4 informants talking to 3 different interviewers

| By Informant | To Interviewer | | Number of tokens<br>Y'KNOW | TAG | EH | HRT |
|---|---|---|---|---|---|---|
| Maori | MM | Pine | 133 | 0 | 48 | 32 |
| man | MF | Pania | 98 | 2 | 20 | 56 |
| Duncan | PM | Paul | 69 | 0 | 16 | 53 |
| Maori | MF | Pania | 39 | 0 | 3 | 50 |
| woman | MM | Pine | 86 | 1 | 2 | 40 |
| Kay | PF | Jen | 29 | 0 | 0 | 16 |
| Pakeha | PM | Paul | 21 | 3 | 0 | 17 |
| man | PF | Jen | 106 | 4 | 1 | 7 |
| Lee | MM | Pine | 210 | 8 | 0 | 9 |
| Pakeha | PF | Jen | 26 | 4 | 0 | 59 |
| woman | PM | Paul | 5 | 1 | 0 | 31 |
| Sally | MF | Pania | 8 | 2 | 0 | 55 |

4. EH occurs overwhelmingly in the speech of the Maori man Duncan, although there are some tokens by Kay the Maori woman.
5. HRTs are common except by Lee the Pakeha man. Note that there is a kind of complementary distribution of the two last features for the Pakeha man and woman—Lee uses Y'KNOW and not HRTs, and Sally HRTs and not Y'KNOW.

## 5. Quantitative Analysis

One of the main problems with discourse variables is deciding what to count. The main issue is what do we count as potential but not actual occurrences of pragmatic features such as HRTs or EH? Here we have quantified all four features over the amount of speech produced by the particular speaker, and amount of speech is in terms of word count. This produces an index for the feature, which consists simply of the number of occurrences of the feature divided by the number of words produced by the speaker, and then multiplied by 10,000. The multiplier of 10,000 yields indexes generally in double digits, so easy to grasp. And 10,000 words is actually close to the average amount of informant speech per interview, so it represents in some sense a normalized interview length.

### 5.1. EH by Informants

The pragmatic particle *eh* is one of the most high-profile sociolinguistic markers of English within New Zealand. It is criticized by prescriptivists, satirized by comedians, and utilized by advertising copywriters to create social caricatures (Bell 1992). Both the New Zealand stereotype and the research findings associate the variable EH with the speech of Maori rather than Pakeha, and to a lesser extent with men rather than women.

In Table 3 EH is used by Maori speakers, overwhelmingly by the Maori man Duncan—84 tokens in all (see Table 2 for raw tokens). In fact his index while talking with the Maori male interviewer is similar to the index for young Maori males in Porirua study

**Table 3** EH Index in speech by Informants to Interviewers

| | | To Interviewers | | | |
|---|---|---|---|---|---|
| | | Pine<br>MM | Pania<br>MF | Paul<br>PM | Jen<br>PF |
| **By Informants** | | | | | |
| Duncan | MM | 46 | 26 | 19 | — |
| Kay | MF | 2 | 4 | — | 0 |
| Lee | PM | 0 | — | 0 | 1 |
| Sally | PF | — | 0 | 0 | 0 |

(Holmes, Bell & Boyce 1991). Kay the Maori woman also uses some EH, but at a much lower frequency -only 5 tokens. By contrast, the Pakeha speakers use virtually no EH. Sally uses absolutely none at all, and there is only 1 token from Lee the Pakeha man in nearly four hours of recorded talk.

We can see thus how EH is functioning mainly as a marker of group identity primarily of ethnicity (Maori), and secondarily of gender (Maori men). This pattern of usage fits the association of linguistic features with group usage which we outlined in the summary of audience design above. It also accords both with our previous findings, and with popular stereotype.

Turning to the shifts which informants make in different interviews, as hypothesized in audience design, the speakers use different amounts of EH with different interlocutors. In particular, Duncan the Maori man uses EH more often in interview with Pine the Maori male, less with Pania the Maori woman, least with Paul the Pakeha man. At a very much lower level of frequency, this is parallelled by Kay the Maori woman informant. She uses some EH with her most like interlocutor (Pania the Maori woman), less with Pine the Maori man, and none with Jen the Pakeha woman (despite the Pakeha female interviewer using one token of EH herself).

These are the kinds of fine-grained shift which is the core principle of audience design as outlined above. It conforms with an interpretation of EH as a marker of Maori identity, particularly for men.

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### 5.2. HRTs by Informants

The High Rising Terminal involves an intonation pattern in the form of a high rise, questioning pattern, but used on a tone group which is a statement. One interpretation is that its use indicates hesitancy or doubt, but NZ researchers have interpreted it as a marker of interactive solidarity and affect (Britain 1992). This feature is stereotypically associated in New Zealand mainly with younger Pakeha women. The research partly confirms this. David Britain's findings were that HRTs are used mainly by younger speakers (i.e. our group of speakers), particularly by women, and to a lesser extent by Maori. The research has also shown that HRTs are sensitive to the genre or text type of the speech in which they occur, being particularly common in narratives. The analyses we present unfortunately still lack this sub-categorization.

In Table 4 Sally the Pakeha woman uses by far the highest level of HRTs. Lee the Pakeha man uses very considerably the lowest, and the others are in between. So the identification of HRTs with women, particularly Pakeha, seems confirmed, and also possibly with Maori.

Who are HRTs used to? Tracking the shifts between interviews, we can see that HRTs are used more to women than to men. So Duncan, the Maori man, uses most HRTs to Pania the Maori woman, and fewer to the two men who also interviewed him. Sally the Pakeha woman uses fewest to Paul the Pakeha man,

**Table 4** HRT Index in speech by Informants to Interviewers

| | | **To Interviewers** | | | |
|---|---|---|---|---|---|
| | | Pine<br>MM | Pania<br>MF | Paul<br>PM | Jen<br>PF |
| **By Informants** | | | | | |
| Duncan | MM | 31 | 72 | 62 | — |
| Kay | MF | 34 | 72 | — | 38 |
| Lee | PM | 6 | — | 23 | 6 |
| Sally | PF | — | 90 | 60 | 80 |

more to the two women who interviewed her. The same pattern holds for Kay the Maori woman, although her frequency to Jen the Pakeha woman is close to that to Pine the Maori man. So again, we have some confirmation that the informants are shifting their style according to their audience for HRTs.

But questions remain: why does the Pakeha male informant Lee produce his only appreciable level of HRTs to Paul, the Pakeha male interviewer, and not in particular to the Pakeha woman? And why—if HRTs are particularly identified with Pakeha women—aren't more used to the Pakeha female interviewer Jen?

### 5.3. EH by Interviewers

So far, so tidy (more or less). Let us turn now to the interviewers' usage of EH and HRT in these same interviews. Here it needs to be remembered that these were not ordinary conversations with both participants claiming equal rights to speaking time. These were interviews, and the interviewers provided much less of the talk. The kind of talk they provided also necessarily militated against usage of some of these pragmatic features. In particular, both Y'KNOW and HRT by and large tend to occur in a flow of talk of a kind which interviewers are not usually producing.

On the other hand their role as interviewers is to establish the kind of rapport with the informants that will encourage them to relax and talk. That is, the pressures on the interviewer to accommodate to the informant are probably greater than vice versa, despite the comparatively little speaking time the interviewer will have to display this linguistically.

Table 5 shows that the interviewers use more EH than the informants (cf Table 3)—with the one exception of Duncan the Maori man talking to Pine the Maori male interviewer. Why is this? In general terms we can refer it to their role in the interview and the onus that is on them to interact in a positive and solidary way with the informants. It appears that in order to do this, they make use of the feature which is available in the NZE speech community for that function to some extent without regard for the social meanings it brings with it.

There is an indication that more EH is used the more de-

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mographically distant the interlocutor—in the speech of Paul the Pakeha male interviewer, quite strikingly so. In the baseline interview with Lee the Pakeha male informant, Paul uses zero EH—demographically appropriate. He has an EH index of 14 to Sally the Pakeha woman, which in terms of her own linguistic behaviour is inappropriate accommodation as she herself uses none at all. Most notably, his index to the Maori man—the high EH user—is 29.

This can reasonably be interpreted as hyper-accommodation. Paul in fact has a good deal higher level of EH in the interview than his informant does. The interpretation of hyper-accommodation receives support from other facets of this interview. Paul was clearly nervous in conducting it, presumably because of the ethnic distinction between him and the informant. This was marked in various ways, but especially through a good deal of prolonged nervous giggling at quite inappropriate points of the interview.

So we can observe that there is mutual accommodation in Paul's interview with Duncan the Maori man, with the Maori man shifting to a lower EH level, and the Pakeha shifting from a zero base to a quite high level of usage. Looking at the numbers, we could in fact say that they are shifting half way to meet each other.

The Maori male informant Duncan receives more EH than anyone else. But alongside that we have to note that Sally the Pakeha woman receives almost as much with indexes of 35, 14

**Table 5** EH Index in speech by Interviewers to Informants

| | | **By Interviewers** | | | |
|---|---|---|---|---|---|
| | | Pine<br>MM | Pania<br>MF | Paul<br>PM | Jen<br>PF |
| **To Informants** | | | | | |
| Duncan | MM | 6 | 28 | 29 | — |
| Kay | MF | 10 | 25 | — | 5 |
| Lee | PM | 0 | — | 0 | 3 |
| Sally | PF | — | 35 | 14 | 9 |

and 9. Why?!—well, we think this is audience related, but not demographic. Sally is a slow, hesitant speaker—not uncooperative, just reticent, the least talkative of the four informants. And our interpretation is that the interviewers worked particularly hard to encourage her talk, and this explains the high usage of EH to her, as it were against the demographic associations of the feature.

Notice that the level of EH from the interviewers increases as the demographic distance increases, so that Jen the Pakeha woman interviewer uses least (9) to Sally, Paul the Pakeha man next (14), and Pania the Maori woman most (35). This seems to be counter to what one would expect from audience design: the interviewers are using a feature which does not appear in her own speech. It is indeed counter to the demographic associations of EH, but we think the interpretation just offered is not just an ad-hoc attempt to rescue the framework in the face of contrary evidence.

It also raises an important point. While we have presented our analysis here largely in terms of demographic characteristics, accommodation to one's audience is in fact much wider than that. It includes speakers making active use of the resources of their speech community in order to accomplish their conversational purposes, in this case a successful interview. You will see that we are now doing what Rickford & McNair-Knox (1994) eventually found they had to do as they explored the style patterns of their speaker—interpreting as best we can what appears in the quantification, even though it does not fit our hypotheses very well. This can be regarded in two lights: either as commonsense flexibility to interpret the meaning of the patterns that occur, using whatever explanation seems most appropriate. Or alternatively, it can be seen as post-hoc rationalizing of whatever happens to turn up even if it conflicts with your own theorizing. This seems to be one of the main issues for any attempt at a framework for regularizing style shift.

### 5.4. HRTs by Interviewers

To show that our interpretations are not purely ad hoc, look at Table 6, which presents the interviewers' usage of HRTs. Now recall that HRTs generally occur in narratives or at least a flow of talk,

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**Table 6** HRT Index in speech by Interviewers to Informants

| | | **By Interviewers** | | | |
|---|---|---|---|---|---|
| | | Pine | Pania | Paul | Jen |
| | | MM | MF | PM | PF |
| **To Informants** | | | | | |
| Duncan | MM | 0 | 5 | 10 | – |
| Kay | MF | 5 | 12 | – | 0 |
| Lee | PM | 5 | – | 0 | 0 |
| Sally | PF | – | 22 | 7 | 9 |

and interviewers do not do much of that. Nevertheless the pattern of Paul the Pakeha male interviewer for HRT is exactly the same as for EH—again using more of this feature the more distant the demographics of the informant. He uses zero HRTs to Lee the Pakeha man, an index of 7 to Sally the Pakeha woman, and 10 to Duncan the Maori man. So this pattern may reflect something genuine about this interviewer, his informants and their interaction in these interviews.

Relative usage to informants is in line with the informants' own production of HRTs in Table 4—by far the most HRTs are used to the Pakeha woman, and least to the Pakeha man. In addition, relative usage *to* interviewers (Table 4) has exactly the same structure as usage *by* interviewers (Table 6).

## 6. Qualitative Analysis

We believe the quantification just outlined tells us a good deal about the style of speakers within these interviews. But such quantification does not tell us everything there is to know about a speaker's style in a certain stretch of language. Linguistic variables do not just occur as features to be counted within an undifferentiated chunk of speech. They occur on-line in the flow of speech. When and where they occur in the course of a conversation may tell us something about the speaker's style, about their patterns of identity expression or audience design. Individual tokens of the variable may have heightened significance in the flow of the interaction, or they may cluster together with each other or with other variables in a way which is significant.

So for the 12 interviews, we have graphed the occurrence on-line throughout the interview of the four features, partly with a view to seeing where individual tokens of the feature occur, more particularly to see if tokens cluster or scatter. Secondly, in order to see if there are any noticeable patterns of co-occurrence between the different features, so that different features tend to either occur together or be in complementary distribution.

Figure 1 tracks the occurrence of tokens of the four pragmatic features throughout interview. This is Interview 1 between the two Maori men, Duncan and Pine. It is 86 minutes long, taking nearly 3 sides of tape. The different sections of the interview are marked in the figure.

We can see what we already knew from the quantitative analysis—there are zero TAGs in this interview. The other three features do occur, however. EH makes a slow start, but increases especially in the last quarter of the interview, and there is a certain amount of clustering of tokens. The pattern for Y'KNOW is similar—a late starter, with some clustering, but it occurs more frequently. We also have to wait for HRTs to begin occurring—first token at 9 minutes, second and subsequent tokens from 17 minutes—and the tokens are more scattered.

The occurrence of tokens on-line has been graphed in a similar fashion for all interviews, enabling us to make some generalizations about the qualitative occurrence of the features. First, we can see at a glance that TAGs are rare and scattered throughout, with no obvious on-line patterning.

Secondly, tokens of Y'KNOW are scattered throughout most interviews. It is clearly the default feature, as the quantification tended to indicate. Its relative lack of social associations is shown in it being the most evenly distributed throughout the interviews of the four features.

However there are particular concentrations of Y'KNOW in the Set Topic sections of several interviews. It is clear that for the Pakeha man Lee especially Y'KNOW is a primary expository particle. In the discussion of gender and ethnic issues, which were the set topics in interviews 2 and 3, he expounds his views at

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length and in great detail—for over an hour on ethnic relations in New Zealand. He produces frequent clusterings of Y'KNOW, with 5-10 tokens in a run, and even the occasional pair of 2 Y'KNOWs following each other directly. It is striking that where the other speakers would use HRTs in narratives or narrative-like texts or in sensitive-topic contexts, Lee uses a run of Y'KNOW.

For example, when discussing the issue of their own competence in the Maori language (in Interview 3, with the same-gender Maori interviewer), Lee uses a cluster of 12 Y'KNOW. When the same question came up in Sally's interview, she produced a series of HRTs. Exactly the same happened in both interviews when the question of sensitivity to Maori customs in relation to food and hygiene arose—a string of Y'KNOW from Lee, and of HRT from Sally.

Thirdly, like Y'KNOW, HRTs tend to cluster, but more in pairs than multiples—although multiples do occur. To those familiar with the feature, this will be no surprise. EH of course can really only be examined in the speech of Duncan the Maori man. It is noticeable that Duncan tends to hold back use of this ethnic identity marker until some way into each interview. Even in speaking to Pine the Maori male interviewer, he scatters just 3 tokens across the first 20 minutes of the interview, before settling into a much more regular level of the variable. It is as if he is testing his interlocutor out before committing himself to use of this ethnically marked particle. With Pine the Maori man, it is a discussion of his grandmother's *tangi* (funeral) that triggers a run of EH tokens. There are not many runs of EH, but they occur invariably with 'Maori' topics—family, the *reo* (Maori language), Maori culture, etc. They often co-occur with use of Maori lexical items borrowed into the English discourse.

Maori issues are discussed frequently in this interview, and usually trigger a token or two of EH. While speaking to the Pakeha man, however, about Maori issues it is very noticeable on the on-line graph that Duncan produces little EH, but a lot of HRT and Y'KNOW. This reinforces our view of EH as an ingroup identity marker. Duncan does not use it to claim Maoriness to a non-Maori, but to establish solidarity with other Maori.

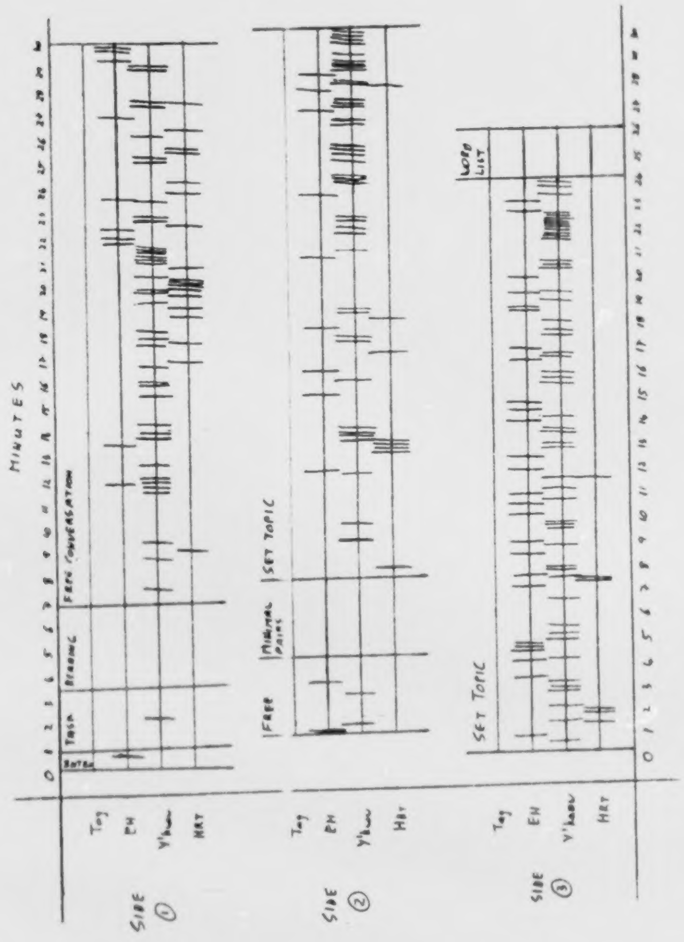

**Figure 1.** On-line occurrence of tokens of four addressee- oriented pragmatic features in speech of Maori male informant (Duncan) to Maori male interviewer, Pine.

## 7. Conclusion

In conclusion, we would argue two things. First, we need complementary qualitative and quantitative analyses. At very least, the qualitative enriches our interpretations. It may even change the interpretations we would reach based only on quantification. It shows up things that are not evident in quantification, such as the different usages by different informants in these interviews on the same topic. Talk is an on-line phenomenon. When we count, we necessarily lump things together, and that is a needful part of analysis. But there is also a time to keep things separate, and examine how individual tokens are operating on-line in the flow of a conversation.

Secondly, we would argue for a complementarity of audience and referee design, of response and initiative, of the relational and the identity functions of language. In this sense we would now want to consider modifying the original audience design proposals so that audience and referee design are regarded as operating in parallel, rather than referee design being an occasional factor. What we can observe from our interpretations above is that when audience design seems not to hold, our post-hoc explanation of what is going on is still largely either in terms of the audience (for example, why more EH is used to Sally) or of an identity, referee function (e.g. in the clustering of EH). Approaches to style are increasingly taking account of these facts. Certainly, we believe a sociolinguistics of style will be found in the fusion of the audience and the referee, and the quantitative with the qualitative.

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# Engendering Identities: Pronoun Selection as an Indicator of Salient Intergroup Identities

Miriam Meyerhoff

## 1. The Problem

Don Hindle's (1979) study of the speech of Carol Myers provided a number of significant findings for the study of variation both within a speech community and within an individual speaker's repertoire.[1] Hindle showed very clearly that community-wide phonological changes were reflected in Myers' stylistic variation (and one of Hindle's other major contributions was to offer an operational definition of formality), such that in her most relaxed or informal setting Myers' speech showed the most reflexes of innovative phonological forms, while in the most formal setting, her speech showed reflexes of more conservative community norms. However, despite the fine phonetic discriminations he made, and despite the fact that he proved a sensitive observer of Carol Myers' social situation, Hindle was left with a puzzle. For one vernacular change, (ay°) (the raising of the diphthong in BITE before voiceless consonants), Myers used more conservative phonological variants at home and with friends, and the most innovative, vernacular forms at the office. This was contrary to the expectation that the more relaxed and informal environment among peers would favor the production of more innovative variants of vowel changes in progress. Since this expectation was borne out for other changes in progress (see Table 1), Hindle looked more closely for potential motivations for this reversal.

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[1] I am grateful to Gillian Sankoff, Janet Holmes, Howard Giles and the audience at NWAVE 25, University of Nevada, Las Vegas for comments and discussion of the ideas developed here. Warmest thanks to Sharon Tabi for her help with the tapes in Bislama. Fieldwork in Vanuatu was supported by the Wenner-Gren Foundation, grant #5742.

| | **DOMAIN** | |
|---|---|---|
| **VARIABLE** | **Office** | **Bridge Game** |
| (aw) | + conservative | + innovative [fronted, raised] |
| (ow) | + conservative | + innovative [fronted] |
| (ohr) | + conservative | + innovative [raised] |
| (ay) | + innovative | + conservative |

Table 1: Carol Myer's use of conservative vs innovative forms of four changes in progress in the Philadelphia speech community in two social domains (adapted from Hindle 1979: 138, 170ff)

Hindle noted that there is a qualitative difference between the variables. The (ay) raising is a change for which Philadelphia men are the leaders while the others are changes being led by women. He concluded "[this] suggests that what may be going on is accommodation" (1979: 145), "[Carol Myers] adjusts her speech to be more like the [speech of] the people she is talking to" (1979: 171). However, he also notes that this passive notion of accommodation misses the "expressive" (1979: 171) function of these shifts. He notes that Myers' behavior seems to indicate that innovative forms are not only an index of a lack of formality and Philadelphia-ness, but are also an index of gender; they constitute "an identification that is actively used in social interactions" (1979: 171).

Half a world away, Edina Eisikovits (1987) found strange, see-sawing patterns of variation in her interviews with Sydney adolescents. Eisikovits found that teenage girls exhibited the kind of style shifting we would expect. As illustrated in Table 2, when they were talking to each other (the intragroup condition) they used more non-standard syntactic forms, but in discussions where Eisikovits was also present (the intergroup condition), they used fewer non-standard forms. However, teenage boys showed the opposite pattern. The boys increased the frequency with which they used non-standard forms when they were talking in the more formal situation of an interview with Eisikovits.

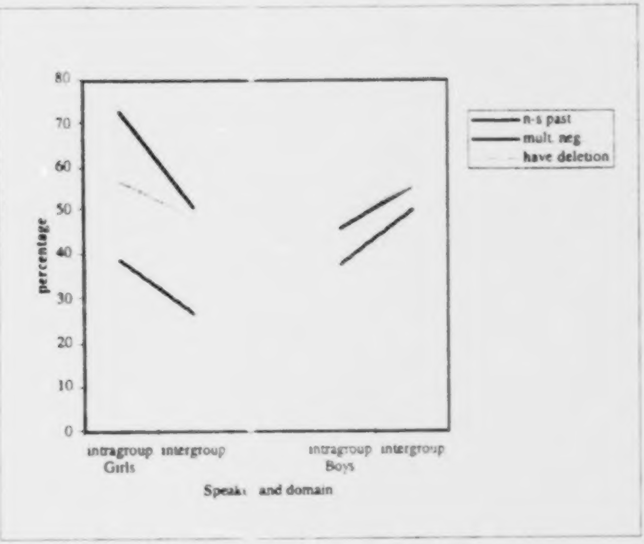

Table 2: Use of non-standard syntactic variants (past tense, multiple negation and deletion of have) among Sydneyside adolescents when talking with friends (intragroup) and with an interviewer (intergroup) (adapted from Eisikovits 1987: 49-51).

Eisikovits attempts to account for this unexpected data in terms of accommodation theory. Going back to her interviews she finds a qualitative difference in the teenagers' conversations with her. She concludes that "[t]he female informants in this study clearly showed a far greater identification with the female interviewer than the males" (1987: 55), and that the boys' behavior was strategy of divergence from her own, female, middle-class norms.

Similar studies throughout the variationist canon readily come to mind. Orderly patterns of sociolinguistically stratified variation bleed into untidy anomalies or exceptions. Unable to incorporate them into a systemic account of variation, the investigator explains these anomalies as being the result of the

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speaker's accommodation to or divergence from (a) a social identity of the addressee that the sociolinguist asserts (but does not demonstrate) is most salient for the addressee, or (b) a social role which the sociolinguist infers (but does not demonstrate) the speaker identifies their addressee most with. Nor does the average sociolinguistic study that invokes the notion of accommodative convergence or divergence demonstrate any underlying attitude or social identification of the **speaker** that would motivate or direct their behavior (Greenwood 1996 is a notable exception). Notwithstanding, the variation is presumed, in this way, to be both seen and accounted for.

This use of communicative accommodation theory (or CAT) (Giles et al. 1973, Bourhis and Giles 1977, Thackerar et al. 1982, Giles and Coupland 1992, Niedzielski and Giles to appear) has some serious critics. William Labov, for instance, has been dismissive of calling it a theory since CAT is not framed in terms that are clearly falsifiable or predictive. Moreover, its use in sociolinguistics has very often been a hand-waving device used at the last minute to give the impression that the investigator has "explained" all observed patterns in their data.

This paper addresses the following question: is accommodation forever destined to be a *deus ex machina* in sociolinguistics research? Or instead, is sociolinguistics able to provide precisely the sorts of empirical evidence CAT needs to lend weight and precision to its principles and claims?

I believe that there is a role for CAT in the study of language variation and change, because I believe that accommodation principles are the heart of the co-construction and interpretation of social identities. I argue, therefore, for a more rigorous application of accommodation theory in sociolinguistic practice. I will examine in detail a case of communicative divergence and show that the selection of a particular linguistic token plays a constructive role in establishing and defining a relationship between the interlocutors. The task of applying accommodation theory more rigorously in sociolinguistics is by no means impossible, the trick, such as it is, lies in recognising the limits of the different theories and the limits of the numbers.

## 2. The Data

The data is drawn from recordings of conversational Bislama, the creole spoken in the Republic of Vanuatu, made during nine months of fieldwork in urban and village communities in northern Vanuatu. The data will be used to illustrate two things: one, the manner in which I believe notions of interspeaker accommodation and divergence can and should be used in sociolinguistic analysis. Two, that speaker identity — another theoretical notion much used in current sociolinguistics – is not by definition antithetical to quantitative methods. The process of reflecting and constituting social identities in conversation need not simply be assumed as a theory-internal property of language, but rather can be empirically observed in speakers' linguistic strategies.

Bislama, like most Oceanic languages, marks an inclusive and exclusive distinction in the 1p pronouns, i.e. mifala refers to the speaker and some third party, but not the addressee, while yumi refers to the speaker and the addressee (and perhaps some other third party).

| | **Singular** | **Plural** |
|---|---|---|
| 1st (excl.) | mi | mifala |
| (incl.) | – | yumi |
| 2nd | yu | yufala |
| 3rd | hem | olgeta |

Table 3: Singular and plural pronoun contrasts in Bislama today

Technically, inclusion and exclusion are truth conditional. This is shown in example (1), where the speaker corrects herself when she remembers that her addressee once accompanied her on the same interisland shuttle plane.[2]

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[2] Examples taken from my database identify speakers by a pseudonym, where they live (Santo, the urban community; Malo, the village community), their sex and age

(1) Elsina (Santo, F30yr):

| | |
|---|---|
| yu save from plen **mif-** | because you know the plane we- |
| **yumi** tekem long Ambae | you and I took from Ambae |

But in practice there is some confusion about this, as example (2) shows. Lolan uses the inclusive form yumi to establish the orientation for a story she is about to tell, but one of her addressees, Janette, is struggling to remember the event.

(2) Lolan (Malo, F31yr), Janette (Malo, F30yr), Madelin (Malo, F26yr):

| | |
|---|---|
| J: long naet? | it was night? |
| L: yes yes | |
| mi luk hem | [and] I saw him |
| hem ya **yumi stap ya** | it was when we were there |
| mi mi ting se | I think it was |
| J: long saed blong opening haos blong telefon? | at the opening of the telephone house? |
| L: no no | |
| a, bringanbae blong ol elda | um, the bring & buy[1] for the elders |
| M: bringanbae blong eria elda | the bring & buy for the area elders |
| J: wea? | where? |
| L: no, **yu yu no bin kam** | no, **you** weren't there |
| Lisette i kam. | Lisette came |

The confusion here arises because the inclusive form yumi is also widely used metaphorically, a fact that is not commented on in the descriptive grammars of Bislama (Tryon 1987, Crowley 1990). In other words, whether or not the addressee was an actual co-agent or co-experiencer of an event, yumi can be used metaphorically to signal that the speaker is prepared to extend honorary participation to them. We cannot say exactly what the speaker intends when using the inclusive pronoun metaphorically like this, but it is enough to say that the effect of metaphorical yumi is to blur the intergroup boundaries between interlocutors, and this effect can be clearly derived from the differences in meaning of the two variants, mifala and yumi. Thus, to some extent, every metaphorical use of yumi constitutes a perlocutionary act, akin to dubbing or naming. Whether this use of yumi makes the addressee actively identify with the speaker, or whether all the interlocutors recognize the strategy as involving a suspension of belief — play-acting, as it were — is an open question. The answer is a moot point for this paper, although it is surely of some importance to the interactants, particularly if there are mismatches between the speaker's and the addressee's interpretations of the effect of the speech act.

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[1] A "bring and buy" is a fundraising event, often for church or school. Families make food, bring it to a central gathering and people buy their dinner for a small cost from everyone's contributions.

The difference between yumi and mifala lies in their value with respect to inclusion of the addressee. The first is [+ you] and the second [- you] (Mühlhäusler & Harré 1990, Noyer 1992). However, inclusion is both a referential property and an empathetic property (e.g. people talk about "feeling" left out of decision-making, even when present; guests are invited to feel like part of the family, etc. etc.). This means that when yumi is used in a metaphorical way, it is a clear indicator of a speaker's psychological or affective orientation towards the addressee. I will argue that what we are observing is a strategy best described in terms of communicative accommodation.

## 3. The Identities

Responsible sociolinguistics has always been careful to describe and parametrize variation within a community along dimensions that are most relevant to the speech community itself. In recent years, we have seen a renewed emphasis on this, with researchers contextualising their findings in detailed social or ethnographic observations, perhaps the most familiar exemplar being Eckert's work on adolescents' speech (e.g. Eckert 1989, Eckert and

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McConnell-Ginet 1995), but as also demonstrated recently in work by Greenwood (1996), Bucholtz (1996), Fought (this volume).

It is absolutely clear, from even cursory contact with Vanuatu society, that two of the most important identities in social, or public domains, are gender[4] and membership in a family clan. Gender is linked very closely to biological sex in Vanuatu (as is reflected in my identification of speakers as "female" or "male"). For women, in particular, social identity as a woman is very closely tied to physical maturation and child-rearing, and this role is not as open to contestation as it is in North America. The salience of gender (generally also recognizing its close relationship with sex) has been discussed for a number of social and interactional domains (religion, social grading, economic power, and control of land and reproduction) in Vanuatu by Molisa (1983), Rubinstein (1978), Jolly (1987, 1991), and Keat (1995), and it was also overtly commented on by my informants.

In the village community I worked in, the significance of family group membership is also directly commented on by members of the community. Rubinstein's (1978) work in the same area discusses the salience of the distinction between "Up-hill" and "Down-coastal" communities, and the fact that family groupings are often reified and maintained through distinct naming patterns.

The salience of sex and family membership are directly reflected in the metaphorical use of yumi as an inclusion device. Even in interactions that were starkly intergroup contexts, e.g. when someone was explaining how to behave around older men in the community, or how to pollinate vanilla, I found women in the village community freely used the inclusive yumi to me despite my outsider status and despite the fact that my stranger status was highlighted by the topic of conversation. This was by no means a peculiarity of how people addressed me. As example (2) showed, Ni-Vanuatu women would sometimes use the inclusive form to each other, even when the conversation topic was highly contrastive of their experiences. Men were much less likely to extend the inclusive form to me, and sometimes, as shown in (3), they went to some effort to avoid it. NP possession in Bislama is marked by a prepositional phrase. In (3), Livai starts to say 'the place of ...', but stops, choosing to recast the utterance in a way that avoids the need to use a pronoun at all.

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[4] This is manifested in rather different public roles in Vanuatu, and the different rights and responsibilities of women and men are believed to be customary. However, Ralston (1992) notes that the opposition between of "man:culture:public" and "woman:nature:private" is a post-colonial phenomenon in many Pacific cultures. Jolly (1987) discusses changes in women's pre- and post-colonial social status in Vanuatu.

(3) Livai (Malo, M24yrs):

| | |
|---|---|
| hem i no olsem ples **blong** | it isn't like [our] place |
| long ples ya | this place |

Thus, the intergroup boundary between the genders seemed to be sufficiently salient in most conversations that, as (2) showed, when talking amongst themselves women could override other (truth-conditionally more) relevant intergroup distinctions and address their interlocutor in ingroup terms. Conversely, men required some equally strong intergroup identity to override the distinctiveness between themselves and a woman addressee. So, as example (4) shows, when men did address me with the inclusive yumi it was generally when the conversation had shifted to highlight a distinction between the local family groups and some other outgroup.

(4) Obed (Malo, M18yrs):

| | |
|---|---|
| mi no save... | I don't know... |
| hao nao **yumi** save go | how we should do it |
| blong save kasem wan samting | if we want to get something from |
| long [ples blong **olgeta**] | [the place that belongs to the people uphill] |

## 4. The Negotiations

That speakers' social identities are negotiated across situations and with different interlocutors is widely accepted in the realms of

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intercultural communication and social psychology. Ochs (1992), Eckert and McConnell-Ginet (1992) and Cameron (1996) have argued that much sociolinguistic variation is actually an attempt to index[5] social identities by building or maintaining them through speech, and Holmes (to appear) neatly illustrates this with respect to lexical variables that have semantic meaning and phonological variables that have associative meaning. Holmes provides both kinds of examples because, as she points out, there is no inherent meaning associated with a raised, fronted (aw). What it indexes can only be inferred by a distributional correlation with a particular social category. A variable like yumi, however, provides clear semantic cues as to when indexing is going on and what identities are being indexed. This process becomes particularly clear when inclusion is contested by the addressee, as we saw in (2), or problematized by the speaker as we saw in (3).

In this section, I will examine an extended negotiation of the salience of group identities. The topic remains constant throughout the conversation, so the negotiation of identities is done through choice of pronoun. I will show how this negotiation process can be conceptualized within the framework of the model of communication proposed in Meyerhoff and Niedzielski (1994).

In example (5), Vosale and I have been discussing recent changes in how the market is run. Previously, market had started at 4pm on Mondays, Wednesdays and Fridays and run for approximately 24 hours at a time. The newly elected regional council had decided to allow market to start any time on those three days, which created some problems and some opportunities for the village women who took their produce there. On the one hand, market is very lucrative, and longer hours meant more money. On the other hand, longer hours meant an even more exhausting stint (of up to 30 hours) sleeping and working at the trestle tables. Vosale starts out by addressing me with yumi, but changes her choice of pronoun in response to my invariable use of a generic yu 'you'.

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[5] Ochs (1992) introduces "index" to refer to the fact that linguistic practices both reflect and construct social identities (cf. Butler 1990). Cameron's (1996) point that this is a process of co-construction is well-taken and should be assumed in the discussions following.

(5) Vosale (Malo, F31yr) and Miriam:

| | |
|---|---|
| V: bae **yumi** karem ol ting ya | we (incl.) have to bring everything |
| go long garen | go to the garden |
| karem ol ting i kam long haos... | bring everything home... |
| M: mo afta tu **yu** stap long maket | and then you're at market |
| long wan de mo wan naet | for a day and a night too |
| V: yes, be **yu** stap long maket | yes, but you're at market |
| wan de wan naet | a day and a night |
| be **yu** karem vatu bigwan | but you get as much money as for |
| olsem kopra, a... | copra, eh ... |
| yes be kopra semak | yes and copra's the same |
| sapos **yumi** katem kopra | if we (incl.) cut copra |
| **yumi** smokem long hot ea | dry it in hot air |
| sapos i kasem tu bag | if there's two bags |
| maet **yu** no save kasem | you might not get |
| fo taosen | 4000 [vatu payment] |
| M: be long wan dei long maket | but in one day at the market |
| **yu** save kasem | you can get? |
| V: wan de long maket, hemia | one day at market, yeah |
| **yumi** save kasem faef, fo taosen | we (incl.) can get 5, 4000... |
| be **yumi** go | we (incl.) go |
| stap wan dei wan naet wan dei... | stay a day a night and a day... |
| **yumi** bitim pei blong kopra | we (incl.) get more money |
| ... | than for [a bag of] copra ... |
| M: yu **yu** go wetem | do you go with your friends? |
| ol fren blong yu... | |
| V: yes... | yes... |
| sapos **mifala** fo i go fastaem | if four of us (excl.) go ahead |
| ale i gat tu o tri | well, there'll be 2 or 3 others |
| oli oli kam | they come behind |
| ale **mifala** i stap wet long | well, we (excl.) wait for them |
| olgeta long Naone Ban | at Naone Ban |

Vosale starts out using the inclusive yumi, the form appropriate for a conversation between two women, even though her addressee is an outsider who she knows doesn't have a garden and who doesn't make her living by selling food at the market. However, I miss the significance of this and reply with the less inclusive form, yu, calqued directly from English. Bislama does use yu generically, though naturally it lacks the inherent connotations of inclusiveness of yumi. In her next turn, Vosale accommodates to my behavior and replies with the same form I used. The effect of undertaking this accommodative gesture is to assert merely that what we share is a set of communicative norms. Given my behavior, this is a more pragmatic claim than the shared group identity asserted by her use of the inclusive yumi.

Shortly after this, however, Vosale reverts to addressing me with yumi. It seems that she is again trying to affirm the salience of and inclusiveness inherent in our shared gender identity. Again, I reply in a way that confuses the interpersonal dimension of the conversation. It is unclear what I think the most salient intergroup or interpersonal distinction in our conversation is. For a third time, Vosale uses the yumi which indicates that the group membership she perceives is most salient to the conversation is a shared one, and for a third time, I reply non-inclusively which suggests that for me the most salient identities in the conversation are not shared ones. Vosale now appears to give up her initial hypothesis, and accepts that she is dealing with someone who views our interaction as an intergroup encounter. This incremental revision attitudes in the light of disconfirming information through a process known as 'bookkeeping' has been described by Rothbart (1981) and Weber and Crocker (1983). In this case, the consequence is that Vosale switches to the exclusive form, mifala, to wind up the topic. For the rest of the tape (approximately 45 minutes), she consistently uses mifala, both when speaking in generalities as at the start of example (5), and even when other intergroup contrasts are made salient (circumstances under which I noted that even men might use the inclusive forms with me).[6] My systematic linguistic divergence from the social space she has mapped out for us both eventually leads her to redraw her map of our conversation and to adjust her linguistic behavior accordingly.

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[6] In subsequent conversations, inclusive forms were used again.

## 5. The Conclusions

My goal in this paper has been to pin down with some confidence the apparently evanescent link between speakers' identities and their linguistic behavior. What I hope I have shown is that by using reliable data, this can be done with as much confidence for linguistic variables as it can for non-linguistic variables such as dress style. I have argued that "reliable data", in this case, means variables that possess some inherent meaning. I have tried to indicate the very creative way in which speakers may use a linguistic variable to negotiate and construct social and personal identities through convergent or divergent behavior. Holmes (to appear) has made the point that the investigation of these sorts of variables is essential in order to strengthen our claims about the significance of, e.g. phonological, variables that are not inherently meaningful. I have tried to show that this kind of work is methodologically realistic, as well as being theoretically desirable.

Thus, there is a place for communicative accommodation within the practice of sociolinguistics, and it can directly assist in our analyses of variation. However, it is important to remember that the principles of accommodation are only substantive when measured against patterns of variation. Interpreting apparent strategies of accommodation depends on knowing a good deal about the general social and communicative norms of the interlocutors, as well as paying attention to sometimes subtle semantic cues in the language itself.

In return, accommodation theory has much to offer sociolinguistics. It focuses our attention on the points in an interaction where identity and interspeaker relations are disputed or actively (co-)constructed. Communicative accommodation need not simply be a last ditch save of messy data, which it so often is in sociolinguistics, but in order for it to avoid this fate, it is up to linguists to apply its principles with rigor, and not hindsight.

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An important secondary question, though, is whether the social factors traditionally used in studies of majority sound change, such as age, gender, and social class, are sufficient for an explanation of sociolinguistic variation in this community. There has been an increasing focus on the use of ethnographic techniques in sociolinguistics. As Eckert (1991:213) observes: "The use of ethnography in the study of variation allows the researcher to discover the social groups, categories and divisions particular to the community in question, and to explore their relation to linguistic form." Eckert's own work has shown the importance of non-traditional social categories, namely the categories of adolescent "jocks" and "burnouts" (e.g. Eckert 1987, Eckert 1991). And Mendoza-Denton 1995 explores the role of membership in different gangs. The use of community-specific categories is not new. As early as Labov's 1972 study in Harlem, for example, there was evidence that gang membership can play an important role in sociolinguistic variation. However, there are still many sociolinguistic studies in which the external factors are selected on the basis of tradition, rather than on observation of the community's social structure.

## 2. Social Groups

### 2.1. Gang-related Groups

Among the Latino young adults, several non-traditional social categories came up again and again as ways of identifying themselves and others. In many ways the most intriguing of these, and certainly the most salient in the media, is the category of gang member (also *gang-banger*, *gangster* or *cholo/chola*). But equally important are the relationships non-gang members have to the gangs. First of all, several students were described to me as "not a gang member but he *knows* them." It was clear from looking at several of these cases that *know* means something specific in this type of context. Everyone at this small school, for example, "knows" everyone else in the usual sense, i.e., knows their name and a little about them. This specialized use of *know* means something like "have a connection with," or "sometimes spend

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# A Majority Sound Change in a Minority Community

Carmen Fought

## 1. Introduction

Many of the important theoretical developments in sociolinguistics have come from the study of majority communities, particularly from studies of speakers of Anglo ethnicity in urban settings. The study of variation in minority communities, however, is making increasingly significant contributions to the field. A logical sociolinguistic question is whether minority groups have any role in the sound changes characteristic of the majority community. Many sociolinguistic studies focusing on more than one ethnic group have reported that minority groups do not participate in the same local sound changes as Anglo speakers (Labov 1966; Labov and Harris 1986; Bailey and Maynor 1987). And Labov (1994:157) suggests that ethnic minority speakers are not oriented to the local vernacular development at all, but are instead oriented to a national pattern of koine formation within the nonwhite groups. However there are some studies that do show the use of local dialect features by minority speakers, such as Poplack 1978.

This study will focus on a group of Latino young adults between 15 and 32 years of age who mostly live in a single region of western Los Angeles. Many of them attend Westside Park (a pseudonym), the local continuation school for students who have had learning or disciplinary problems at the regular high school. I conducted sociolinguistic interviews in English with the monolingual English speakers, and in both English and Spanish (which I also speak natively) with the bilingual speakers. The data presented here focus only on the English of these young adults, which is a variety of the dialect known as Chicano English. The main question I will address is whether the features of the California Anglo Dialect play any role in the Chicano English of Los Angeles.

time with." It often applies to people who have family in gangs, who grew up as friends of the gang members, or who want to be in the gang.

An example of someone in this category is Reina, who has a brother in the Culver City gang. She told a revealing story about a time when she was almost shot by members of a rival gang who stopped her and her brother when they were driving through another area of the city. In the narrative Reina tells the gang members that she isn't "from anywhere," clearly indicating that she is not herself a gang member. And yet through her brother, she is affiliated with the gang and is involved in gang-related incidents such as this one. Her narrative appears in Appendix A. Another important subset of the people who *know* gang members is the group known as *wanna-bes*, such as David and Chuck, who are not gang members, but hang around with them and hope to be *jumped in*, i.e., initiated into the gang.

In contrast to people who *know* gangsters, there are those who have, and want to have, no association whatsoever with the gangs. In many places, young adults are by default not gang members because that choice would never present itself in their community. However, all the speakers I interviewed have had to make a choice determining whether or not they would be a gang member. I stress this point because I believe that the social category of "gang status" is as much a part of the linguistic identity constructed by the non-gang members, as it is for the *cholos* themselves. Linguistic behavior aimed at maintaining group boundaries comes from those outside as well as from those inside the group.

### 2.2. Non-gang Groups

The students who have rejected the gangs are generally more traditional in behavior and more law-abiding. The non-gang group, however, also includes the *taggers*, known mainly for creating graffiti, who are often anti-social. Nonetheless, taggers have no connection with the gang members or gang activities, and are perceived in the community as completely separate from the gangs.

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Distinct from gang-related identity, although sometimes intersecting with it, is the category of *parent* or *mom*. This is not a category that one would assume a priori to be important among high school students. I knew that at Westside Park there would be students who had babies, and there is an infant care center at the school itself, which allows students with babies to continue going to class. But the mom identity was used as part of a description of an individual much more frequently than I expected. Though there may be additional categories at Westside Park that I was not able to observe, these were the most salient.

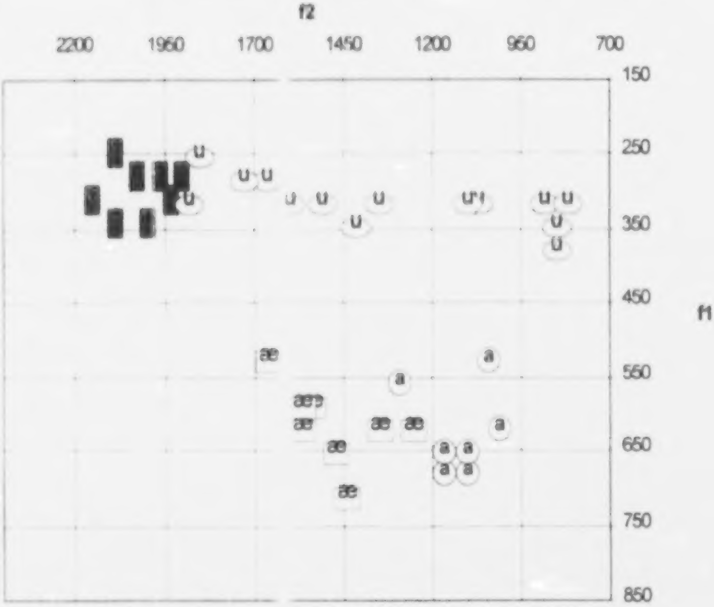
## 3. /u/-fronting in English

In order to address the question of whether these speakers are participating in sound changes characteristic of California, it is essential to know something about the English of the majority Anglo community. Hinton et al. 1987 compared a sample of young native Californian speakers with dialect materials from early in the century and from the 1950's. They looked at several vowel variants, one of which is the fronting of /u/. They found that all of the vowels in the study had shifted in California since the early data were collected. My own interviews with young Anglo speakers from Los Angeles also show evidence of the variables mentioned in Hinton et al., with /u/-fronting being particularly salient.

To check for the presence of /u/-fronting among the Latino young adults, I did a preliminary analysis in which I collected tokens of four peripheral vowels in English: /i/, /u/, /æ/ and /a/, for 32 of the speakers. Using spectrographic data generated by an Autocorrelation analysis of speech samples, I took measurements of the first and second formant frequencies (F1 and F2) for each vowel token.

There was a great deal of variation in the location of /u/ on the F2 axis among the speakers. A comparison of two individual speakers can be used to illustrate the extremes of this variation. Ramon (Figure 1) shows a high level of /u/-fronting, while Avery (Figure 2) shows no significant fronting at all. Some of Ramon's tokens are so far front as to overlap with his /i/ space,

Figure 1: Ramon English Vowels

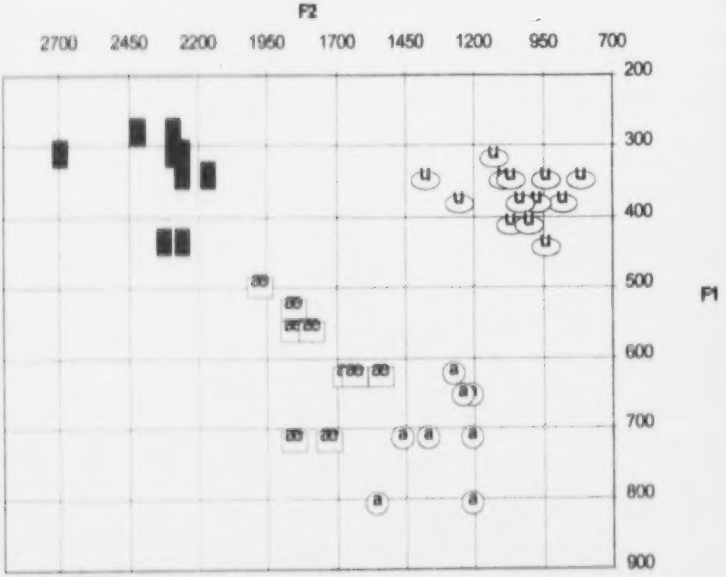


while all of Avery's tokens remain well back, none of them, for example, overlapping with /æ/ in F2 space. I will follow this quick visual appraisal of differences in the F2 of /u/ with a full scale quantitative analysis of the variable.

Not to be overlooked in the general discussion, however, is the striking fact that at least some of the Latino speakers, e.g., Ramon, are taking part in a sound change that characterizes the California Anglo community. In contrast with the results of the studies mentioned earlier, these data support the claim that nonwhite speakers do sometimes participate in the same sound changes observable in the majority community.

In the main part of the analysis, I begin by looking only at the most favorable contexts for fronting: preceding alveolar stops and preceding palatals. The /u/-fronting variable involves both

Figure 2: Avery English Vowels



closeness to /i/ and frontness relative to /a/. Since /i/ and /a/ are diagonally opposed in the vowel space, they can be used together to normalize for differences in the sizes of the speakers' vocal tracts. For each speaker, I took the mean of their individual /u/ token ratios one mean for u-to-i closeness, and one for u-to-a relative frontness. This gives a measure of the degree (as opposed to the frequency) of /u/-fronting, relevant because the preliminary study had shown large variations in degree among people who fronted.

Figure 3 presents these values graphed against each other for 34 of the speakers in the study. The chart shows a correlation between the two fronting measures (the Pearson correlation coefficient is .78, p < .001), and significant variation among the speakers of this community. I have included two Anglo speakers on the chart (Helena and Richard, in boldface) to serve as

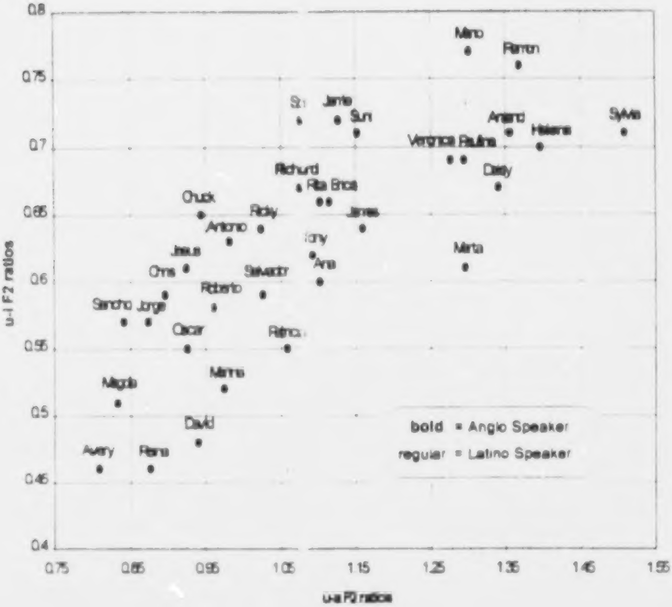


Figure 3: /u/-fronting (All Speakers

reference points for /u/-fronting in the majority community. The speakers that appear in the upper right quadrant of the graph are those who front /u/ the most. Those in the lower left front the least. The distribution generally coincides well with my own auditory evaluation of which speakers sound like they have fronted /u/s.

## 4. Social Categories and /u/-fronting

### 4.1. Bilinguals and Monolinguals

Before identifying the social factors that correlate with this variable, I would like to mention an interesting negative result. One of the most salient linguistic facts about this group of speakers

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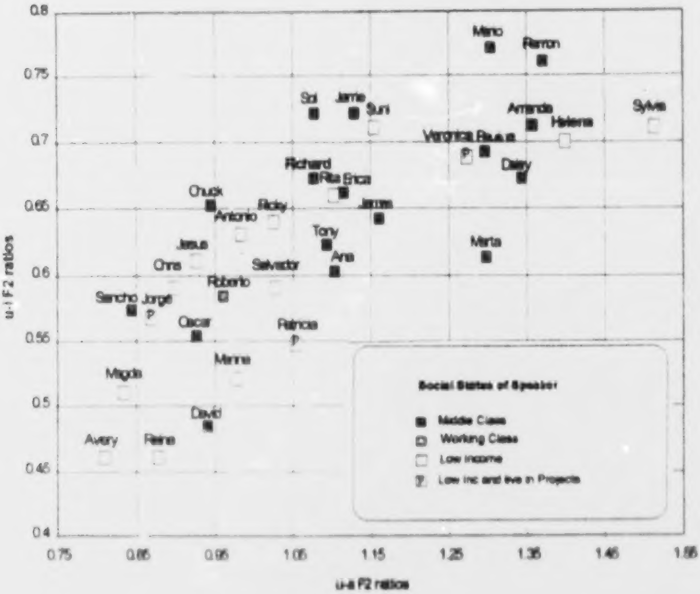
Figure 4: /u/-fronting and Social Status



is that some of them are bilingual and some of them are monolingual. Though the data will not be presented in detail in this paper, I found no correlation between /u/-fronting and whether the speaker was monolingual (in English) or bilingual. Here, as in the rest of the paper, when the level of significance is unspecified it can be assumed to mean significant at the .05 level.

### 4.2. Social Class

Figure 4 shows the same /u/-fronting chart with the speakers labeled for social class. Their social class ranking was determined on the basis of factors relevant to the community, such as whether they live in a house or apartment, their own or their parents' occupations, etc. The speakers in the lowest class are labeled "low

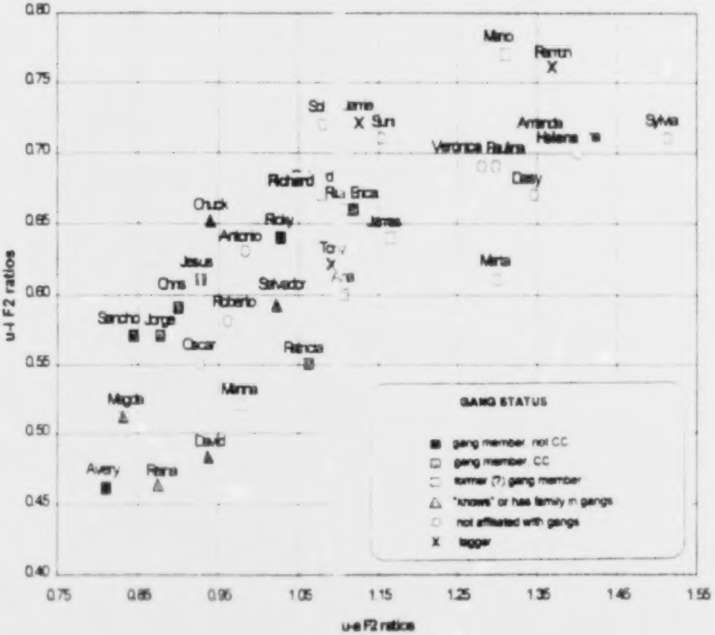


Figure 5: /u/-fronting and Gang Status

income" since this is the community term for them. The chart shows a correlation between /u/-fronting and social class, with a tendency for the middle class speakers to fall at the higher-fronting end, and the working class and low income speakers to fall at the opposite end of the chart. A t-test of the means for middle class versus working class and low income speakers meets the .05 significance level. But a look at Figure 4 reveals that some speakers strongly contradict this pattern. Why, for example, are Sylvia and Veronica heavy /u/-fronters, given that they fall at the lowest part of the socio-economic scale? What are middle-class speakers like David and Chuck doing in the group that fronts the least? To answer these questions, it is necessary to look at factors other than social class that figure prominently in this community, such as gang status.

### 4.3. Gang Status

Figure 5 shows the relationship of gang status to /u/-fronting. The pattern is in some ways reminiscent of that which was seen for social class. Gang members and those affiliated with the gang are found in the lowest part of the chart, while the highest /u/-fronting values occur mainly in people who have no gang affiliation, and the result is highly significant at the 001 level. Once more, however, there are some salient exceptions. Amanda, a Culver City gang member, has very high /u/-fronting, while Roberto, with no connection to the gang, shows very low values. The possibly "former" gang members are spread across the range of values, a not unexpected result given their different histories, which I do not have time to discuss in detail here. I simply want to mention that Marina and Rita are still technically gang members, but participate less since becoming *moms*. In sum, Figure 5 shows a strong relationship between gang status and /u/-fronting, with gang-affiliated individuals fronting less than other speakers. But the exceptions noted above (e.g., Amanda) remain.

## 5. Interactions Among Social Factors

### 5.1. Interacting Social Factors and the Role of Gender

The analysis of social factors so far has shown many clear tendencies, but no single factor has been able to explain the distribution of /u/-fronting among these speakers without leaving out certain striking exceptions. Furthermore, the "exceptional" individuals were different for each social factor, as opposed to the consistent recurrence of the same speakers that one would expect if these particular individuals were anomalous in some way, for example with respect to the normalization. Several studies, such as Eckert 1989 and Labov 1990 have stressed the importance of looking for interactions among variables. If instead of examining the social factors in isolation we take their intersections, looking at each speaker as, e.g. "a gang-affiliated, working class male," a pattern of variation emerges in which gender plays a crucial role. In the next section of the paper, I will show that men and women have a different ordering of social constraints, parallel to the way in which linguistic constraints on a rule might be ordered differently in two communities.

Figures 6 and 7 show the degree of /u/-fronting for speakers separated by sex, and labeled to show both their gang status and their social class. The speakers who "know" gang members are labeled as "gang-affiliated," and taggers, as discussed earlier, are included with the non-gang group. Working class and low income speakers were combined as "working class", since this difference had no statistical significance.

### 5.2. Women

As can be seen in Figure 6, for women non-gang affiliation is the strongest social variable affecting fronting. Note that I am not referring to the general category "gang status", but to the specific sub-group of non-gang speakers. The women with no gang ties all appear in the upper right quadrant of the chart, except for Sol, who has a very high ratio for only one of the measures, but can clearly be heard to front /u/. Interestingly, Sylvia shows an even higher degree of fronting than Helena, the Anglo speaker. Many of these women were from lower socio-economic groups, a factor which in Figure 4 appeared to have a negative effect on fronting generally. Veronica, for instance, lives in the Projects. However, for the women as a group, social class was not a significant determiner of /u/-fronting, while gang status showed a highly significant correlation at $p < .007$.

Social class status does have an important secondary role, though. For just the gang-affiliated women, social class determines how much they front. Gang members with lower socio-economic status fall at the bottom of the chart. Those with middle class status fall higher on the chart. Though the numbers are small, the difference is significant. As in the case of Amanda, it is possible for middle class gang members to front as much as or more than some non-gang women. It should also be noted that women like

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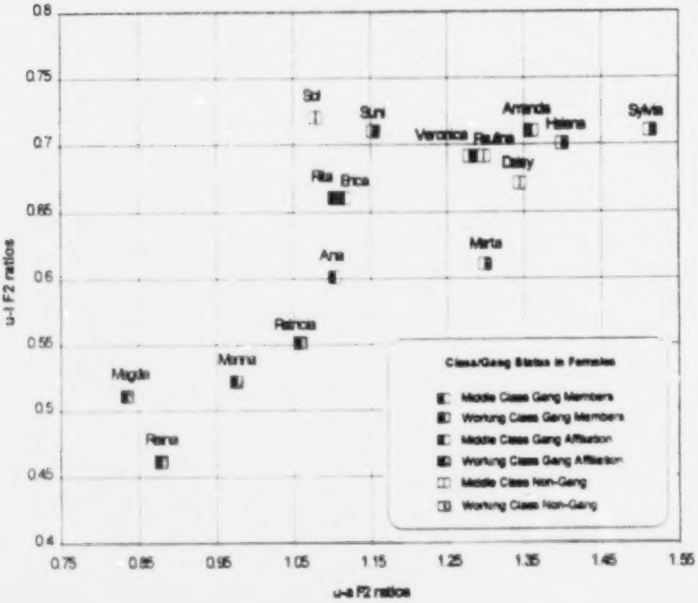
Figure 8: /u/-fronting in Women



Magda and Reina, who are gang-affiliated but not themselves in a gang, clearly pattern with the women who are gang members.

In sum, then, social class does not affect /u/-fronting for non-gang women, who all show some degree of fronting. But for gang-affiliated women, social class is crucial, with middle class status contributing to a high level of /u/-fronting, while lower social status leads to a lower level of /u/-fronting. Grouping the factors in this way yields correlations with the linguistic variable that are highly statistically significant, and the speakers who seemed anomalous before can be seen to fit the pattern.

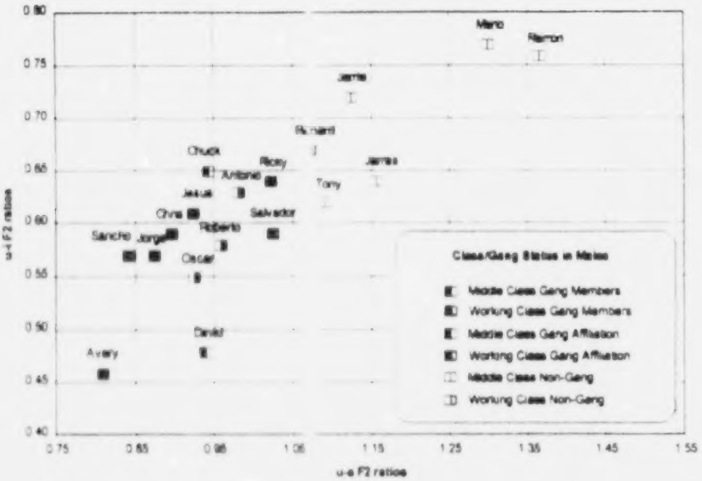


Figure 7 /u/-fronting in Men

## 5.3. Men

In looking next at the male speakers, it will become evident that the effect of gender is also clearly delineated, though it cannot be seen from a simple correlation with the linguistic variable. Figure 7, showing the men only, looks superficially very different from Figure 6, particularly as regards the group of highest fronters. The top 6 women /u/-fronters, for example, were mixed with respect to social class. But all of the top 6 men are from the middle class group, except for Richard the Anglo speaker. The social class factor shows a significant correlation with /u/-fronting for men as a group but not for women as a group. On the other hand, non-gang status does not have the same strong effect for men that it had for women. All the non-gang status women were in the high /u/-fronting region of the chart: for men, however, the non-gang factor is tied to social class. The non-gang men who are also middle class are the highest fronters, but those in the working class group, like Roberto, fall at the middle or low end of the /u/-fronting scale.

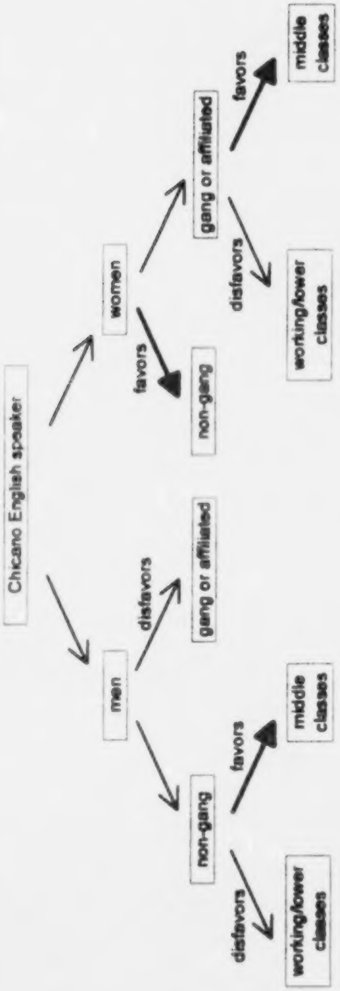

Chicano English speaker
men
women
non-gang
gang or affiliated
disfavors
non-gang
favors
gang or affiliated
working/lower classes
disfavors
middle classes
favors
working/lower classes
disfavors
middle classes
favors

Diagram A: The Interaction of Social Factors in /u/-fronting

There are other ways in which men and women differ regarding the ordering of social correlates of the linguistic variable. The effect of gang affiliation is much stronger for men. Gang-affiliated women had more or less fronting depending on their social class. However none of the male gang members appears in the top part of Figure 7 (comparable to Amanda in Figure 6); this could be attributed to the fact that there are no middle class male gang members in the sample. However, there are two gang-*affiliated* speakers who belong to the middle class group, David and Chuck. These two speakers pattern with the gang members, in the lower part of the chart.

Generally, then, the men and the women show orderings of these two social factor groups (social class and gang status) that are mirror images of each other. Diagram A gives a visual representation of the ordering and interactions of social factors as they correlate with /u/-fronting. For women, non-gang status correlates consistently with a high degree of /u/-fronting. But within the group of women connected to the gangs, social class determines whether the speaker exhibits a higher or lower degree of /u/-fronting. For the men, gang affiliation correlates consistently with relatively low /u/-fronting. Within the non-gang group, social class determines the degree of /u/-fronting.

## 6. Implications

One intriguing result of this research is the fact that /u/-fronting, a sound change in progress in California, shows a pattern of social distribution in the Latino community that does not fit the traditional curvilinear pattern. In the studies of "untargeted" sound change done on majority communities, the interior social classes lead the change, as summarized in Labov (1994:156):

> The pattern now seems clear, at least for cities in the United States. In the course of change from below, the most advanced vowel systems are found among younger speakers: young adults and youth in late adolescence. Furthermore, these innovators are found among "interior groups" - that is, groups centrally located in the class hierarchy... In terms of social class

> labels, this means the upper working class and lower middle class...

In an earlier section Labov (1994: 62) notes that "the occupational groups with highest and lowest social status disfavor the changes in progress". However, in the Chicano English speaking community of Los Angeles we find that the group with the highest /u/-fronting includes women from both middle class backgrounds and very low socioeconomic backgrounds. This is partly due to the strong effect of non-gang status on /u/-fronting. Yet even the effect of gang status, which showed a stronger statistical correlation with the variable than social class, can only be understood completely when it is taken in conjunction with the other factors of gender and social class.

In conclusion, I would like to suggest some possible explanations for the differences in the ordering of constraints between men and women. In particular, non-gang status has a very high impact on fronting for all women, and for middle class men, but not for working class men. Why? It may be that the situation is parallel to that of adolescents in the Detroit area ("jocks" and "burnouts"), as reported by Eckert (1987:106-108). She notes that social pressure related to gender can conflict with social category membership:

> Girls are still expected to be 'good' in other ways - to be friendly and docile... Boys, on the other hand, are expected to be physically powerful and able to defend themselves... Just as the jock boys are caught between conservative corporate social norms and 'tough' gender norms, burnout girls are caught between 'tough' urban norms and conservative gender norms.

In the study of /u/-fronting in Los Angeles, use of the variable is associated more with middle class membership and non-gang speakers. Non-use is associated more with working class membership and gang-affiliated speakers. For women, the societal standards that pressure them to be "good" etc. dovetail well with non-gang status, and also with the conservative norms of middle class membership. This makes it easier for even those women who are from the lowest socio-economic backgrounds to use language norms associated with the middle class group, and also suggests why female gang members might front /u/ if they were from the middle class.

However, society – and this is maximally true of Latino society – pressures men to be "tough," to defend themselves physically, etc. Since gang membership emphasizes exactly these sorts of qualities, it may be more difficult for Latino men to express their disassociation from the gang linguistically than it is for the women, even among men who have made a clear choice not to be gang members. When these men are also middle class, the combination of their class status and non-gang membership is enough to override the pressure to sound "tough." However, when non-gang men are from the working class, another group associated with "toughness," the pressure on their speech patterns is greater, and results in less /u/-fronting.

## Appendix A: Reina's narrative

(Brackets: comments by the interviewer. "hh": soft laughter.)

"Me and my brother, we almost got sha- shot. [CF: Oh, really?] Cause we went to go drop off his girlfriend at work. [CF: Mhm, which brother, the older brother?] The older one. And we stopped at a red light. It was in Santa Monica, then some gangsters from Santa Monica stopped us, and they got off the car. And the one that had the gun stood by my side, and kept asking me if I was from, you know, Culver City. And I told him hh I wasn't from anywhere. And they already knew my brother. Then my brother goes, 'You know what? At least – if you don't respect me, at least respect my sister.' He goes, 'You're- you're the one- I'm the one that you wanna get not her. Don't do nothing to my sister.' And they just stopped, and th- and they were like, 'Naaah, nah, it's all right, it's cool, it's cool.' And then they're like, 'We're gonna let you go, just don't tell anybody this happened.' And they- they were about to shoot, but like my brother told 'em, you know, dis-respec- you're disrespecting my sister. And they just left, and hh before they left hh one of the guys got off and asked for my number! hhh And they got me mad! And I- and I said, 'I'm not gonna give you my number after you tried to shoot me!' hhh And then he goes, 'Oh, I'm sorry, I'm sorry' and then he left. But like, before I would, um.... Before I think I w- I- told- they used to tell me I used to look like a gangster...before. And I used to get chased, by some, like gangs."

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# Addressing The Actuation Question for Local Linguistic Communities*

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## 1. Introduction

Questions concerning language contact and change have long been explored by linguists. Notably, the Neogrammarians investigated the regularity of sound change and the factors contributing to exceptions in the predicted regularity, and proposed that language contact was one such factor. Weinreich, Labov and Herzog's (1968) seminal article not only bridged historical linguistics and dialectology, it also laid forth, for the emerging field of sociolinguistics, five "empirical principals for the theory of language change" (1968:183): (1) the constraints problem; (2) the transition problem; (3) the embedding problem; (4) the evaluation problem; and (5) the actuation problem. The actuation problem is the theoretical linguistic question which asks, "given the proposition that linguistic change is change in social behavior, then" how does change proceed, and what factors are involved in the process of change? (Weinreich, Labov and Herzog 1968:186).

It is agreed that linguistic change and social behavior are linked and that one sheds light on the other. While social change does not necessarily result in linguistic change, linguistic change often reflects changes in social behavior or identity. Since it is accepted that language is always changing, and that this change is not due to chance alone (Weinreich, Labov & Herzog 1968:112), we need to understand what causes change and how it proceeds from social behavior to then be reflected in linguistic behavior. This paper hopes to demonstrate that by expanding our data sets to include linguistically external evidence from ethnology, ethnography, social networks and social history, it is possible to address the actuation question for local linguistic communities.

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## 2. Framing the Actuation Question

In order to address the actuation question, we must first identify what it is we are to study. As sociolinguists and dialectologists, our main goal is not only to gain an understanding of the frequency distributions of linguistic variables, which constitute a shared linguistic norm for a specified group of individuals, but also to gain an understanding into *why* the individuals in a local linguistic community use their denotational code in a certain way, and *how* their localized use of a denotational code indexes changing internal and external "social concepts of groupness" (Silverstein 1996c). In other words, asking *why* and *how* change happens and *what it means* to those involved.

In the interest of time, I offer the following condensed working definition of a local linguistic community, which is highly influenced by Silverstein's (1996a) understanding of the sociology of language:

> A local linguistic community shall be broadly defined as a geo-linguistically localizable group of people who share a coherent denotational code which constitutes a perduring community internal structure which, in turn, specifies shared modes of normativity relating to communication, identification and ideology.

To effectively examine and understand linguistic change in a local linguistic community, we must, as Silverstein (1996b) recommends, recognize that change is an historical problem. Therefore, when examining local linguistic communities, linguistic change "must be historicized in local terms as to what the particular linkages of social formation are, and how the linguistic norm is affected and informs those formations"

(Silverstein, 1996b). To accomplish this, we must develop a localized understanding of the social and linguistic situations in which the local linguistic community operates. Through detailed analyses of socio-demographic, ethnographic and social network data, we form a localized, community internal understanding of the relevant trends and internal subgroups in the community under study. It is important to identify the various subgroups (i.e., the social networks and social pattern behaviors), the trends in population shifts, and historical events, as well as the ideological and material orientation of the community members to the local linguistic community. By developing such an historical socio-demographic and ethnographic profile of the community, we may explore questions of social and linguistic transformation with the possibility of pinpointing factors which lead to linguistic changes (whether in progress or completed).

## 3. Localizing the Actuation Question and the Community

In addressing the actuation question, it is also important to recognize the potential problems if we bias our assumptions of linguistic change to be confined to the possibility of telescoping or expanding. While from the single perspective of the analysis of the linguistic norm, without consideration of its inherently bound social context, this may appear to be an entirely appropriate approach. However, such an approach prevents us from addressing the question of the actuation of change, because it restricts the type of data which we may consider due to a priori assumptions about the directional and system internal consequences of linguistic change. Rather, we need to actively recognize that just as social behavior and social change may take a variety of forms, linguistic behavior and change may also take a variety of forms. This view of linguistic change is not novel, it merely echoes that which has been proposed by numerous scholars including: Bloomfield (1933), Sturtevant (1927); Mathesius (1911); Labov (1981); among many others.

## 4. Community & Dialect Emergence in Thyborøn

### 4.1. Data Collection

My findings are based on data from an eight year research project using an interdisciplinary approach to understand and detail change in a local linguistic community. The research that I have conducted documents the life cycle of a unique, contact induced dialect in the small, recently developed, single-industry community of Thyborøn, Denmark. The data collected include: 75 sociolinguistic interviews; 32 ethnographic interviews, of which 27 include social network profiles; demographic data on all 3,797 residents during the developmental years of 1890-1955; and the compilation of a social history from 1500-1996. Unfortunately, due to time constraints, only a small subset of the data can be presented today. A comprehensive exploration of the community is detailed in Lane (1997a).

Comparing the demographic and social network models to a social history, I determined times of intensive changes, and significant factors operational during those changes. Given the knowledge that a contact resultant dialect emerged in this community, I explored how cohort effects lead to varying types of social changes and linguistic accommodation, which, in turn, resulted in the emergence and more recent transformation of the local dialect of Thyborønsk.

### 4.2. The Emergence of Thyborøn and Thyborønsk

The economic and demographic history of Thyborøn are directly related to the emergence and direction of transformation of the local linguistic norm and the local social constructs and ideology. By examining and understanding the impact of macro-level changes on the community members, we begin to understand the motivations for and the actuation of change, both socially and linguistically.

While the strength of the ties of individuals to their community may fluctuate over time, the central ideologies formed during the community's emergence are likely to be passed along from generation to generation, just as some of the linguistic

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markers are likely to be passed along from generation to generation. In other words, since both the degree of affinity to a community and the degree of use of sociolinguistic markers may vary over time, if we are to understand and predict why changes (social and/or linguistic) arise, we must understand the larger sociocultural context in which the individuals operate. We are all affected by our environment and affect it in return. The resulting linguistic changes of various types of sociocultural shifts can best be understood if one is oriented as to the present situation in the local linguistic community in light of its multidimensional history and perduring modes of normativity.

The development of the dialect of Thyborønsk is mirrored in the development of community mores and identity by the Thyborøn residents. What is especially remarkable about Thyborønsk is the shallow time depth of its history and the various results of contact phenomena. Thyborøn's physical and social emergence dates back to the last decades of the 1800's. During the period of 1890 to 1970, the population grew at an average of 53% every five years. This intensive population growth was due to massive internal migration encouraged by the physical and economic emergence of the new fishing harbor and industry in Thyborøn. Since the early 1980's the population curve has plateaued, remaining at approximately 2,600 inhabitants. By the mid 1900's, Thyborøn had become the fifth largest fishing harbor in Denmark, then one of the world's top producers and distributors of fish. Despite the decline of the fishing industry since the 1970's, Thyborøn has remained primarily a single-industry fishing community. All other businesses either service or rely on this industry, meaning that they too are dependent upon the economic wellness of fishing for their own livelihood. Economic wellness speaks to the permanency of the local population, which is related to the aging profile of the community and the possible obsolescence of the local identity and dialect.

As a result of the failing local single-industry economy, the population has declined. The majority of younger adults leave Thyborøn to seek employment and educational opportunities elsewhere, and they generally do not move back (cf. Lane 1996a, b; 1997a, b, c). Those residents who do remain in Thyborøn express important similarities and differences in their ideological

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orientation to Thyborøn and to the dialect of Thyborønsk. More specifically, while they share a fierce pride in their local identity, that of being a *Thyborønboere*, 'those who live in Thyborøn', they exhibit differences in the distribution of variable features across internally defined groups based on age and sex. However, all of the residents still share a large set of highly localized linguistic features, and still share what can easily be identified as the dialect of Thyborønsk. The residents' sociolinguistic differences are more a matter of degree than quality. It is likely that we are witnessing social and linguistic change in progress. It is hoped that the fortunate timing of this research may offer us a chance to refute the prediction set forth in Weinreich, Labov and Herzog (1968:186) that due to "the number of factors which influence change: it is likely that all explanations [of the actuation problem] to be advanced in the near future will be after the fact."

## 5. The Sociolinguistics of Change

Let us now turn to a brief exploration of some of the similarities and differences in ideology and social behavior which are evidenced in the linguistic behavior of a few internally defined groups of Thyborøn residents.

For present purposes, we will only be considering three groups of residents: (1) the younger group of adult females; (2) the younger group of adult males; and (3) the middle group of adult females. Guided by ethnologic and ethnographic models proposed by Højrup (1983a, b) and Pedersen (1994), I conducted detailed analyses of the social history and network data for Thyborøn (cf. Lane 1997a). As I have detailed elsewhere (cf. Lane 1997a, b; 1996a), only members within a generational group experience particular socio-historical events at similar life stages, hence with similar orientations to the events. The life-stage at which group members experience socio-historical events is crucial to that group's collective orientation to the events, and, in turn, to the effect which those events may have on their orientation to the community. These groups thereby define generational differences within Thyborøn based on the residents' own contrastive and collaborative experiences. Three groups, labeled 1 through 3, were identified: Group 1: 65+ years old; Group 2: 40 to 65 years old;

and Group 3: 16 to 40 years old. Additionally there is a clear division based on sex, which is most absolute for Group 1 and becomes weaker as we move from Group 2 to Group 3. This division translates into a fairly segregated community where the number and type of male to female social relations differ depending on one's generational grouping. Unfortunately time prohibits a thorough discussion of why this small group of people are so stratified; but I refer you to Lane (1997a).

Time and socio-historical events have impacted the degree to which males and females operate in the same networks. The youngest generation, Group 3, interact more frequently with the opposite sex, while maintaining some traditional network pattern behaviors, that of favoring same sex network ties. The linguistic result of these changes will be briefly explored as we note that the younger women appear to be leading the change towards a more non-localized linguistic norm, and their male generational counterparts appear to be lagging behind in some cases, and exhibiting linguistic behavior more typical of the middle generation, or Group 2.

## 5.1. Linguistic Patterns - Old and New

Let us briefly consider three of the phonological rules and a short list of lexical items which are central to the Thyborøn dialect. The phonological rules are relevant because they index local linguistic community allegiance, and they have important lexical, morphological and/or morphosyntactic ramifications. Furthermore, these four items support interesting points raised in Labov (1981) about the relationship of the individual speaker to the type of linguistic change (Neogrammarian regular sound change or lexical diffusion), hence the level of awareness at which the linguistic change in progress is taking place, and the ramifications of the indexical nature of the affected forms within the denotational code.

1. Palatalization of stops in word initial position when followed by a minus low vowel:
   C[+ stop] -> C[+stop, + palatal] / __ V[-low]

2. No diphthongization (i.e. breaking) of Common Scandinavian short /e/. Of particular indexical value is the Thyborøn form [ɛ], 'I'. Presently, among the Group 3 females, this form variably competes with the non-localized ('Standard Danish') form, [jaɪ].

3. As Jakobson (1952) noted, Danish voiced stops weaken to fricatives in post root positions (i.e. d -> ð, b -> β, g -> ɰ). In Thyborønsk, a number of other sound changes and phonotactic requirements conspired to further lenite the weakened stops to glides which regressively assimilated to the preceding vowel, and in some cases deleted (apparently lexically determined) (i.e. d -> ð-> w/j/null, b -> β -> w/j/null, g -> ɰ -> w/j/null). By extension, the liquids and the fricative pair [v] and [f] were included among the class of weakened stops, and also regressively assimilated to the preceding vowel, becoming a glide in the second part of a diphthong (i.e., r/l -> w/j/null and v/f -> w/j/null).

4. Innovative forms arose such as: (a) *ellers*, 'otherwise', as [hɛsn] or [hɛlsn] ('Standard Danish' form is [ɛləɹs]); (b) *tolv*, 'twelve', as [tølˀ] ('Standard Danish' form is [tʌlˀ]); (c) *vejr*, 'weather', as [waɪlə] ('Standard Danish' form is [veˀɹ]); (d) *synes*, 'believe', as [tɔ̈wˀs] or [tɯwˀs] ('Standard Danish' form is [sønəs]); among others.

Table 1 offers some phonetically transcribed examples of these linguistic features from the data set for the three subgroups of Group 2 females, Group 3 males, and Group 3 females. Unfortunately, the coding of these and other variables is just being completed and, as such, regression analyses have yet to be applied to the data (these quantitative results will be available in January 1997).

|  | Group 2 Females | Group 3 Males | Group 3 Females | English Translations |
|---|---|---|---|---|
| 1. Palatalization | gɔ̈/gjɔ̈/gɔ̈j<br>šjɛl<br>kjɪ.nə | gɔ̈/gɔ̈ɹ<br>šjɛl<br>kjɪ.nə | gɔ̈/gɔ̈ɹ<br>sɛlˀ<br>kɛnə | 'do'<br>'self'<br>'know' |
| 2. 1st person sg. pronoun, 'I' as [£] | ɛ | ɛ | ɛ/jaɪ | 'I' |
| 3. Consonant weakening, assimilation, or deletion | gɔwɪ<br>maɪ/mɛ | gɪwɪ<br>maɪ/mɛ | gɪwt/gɪ.ft<br>maɪ | 'married'<br>'with' |
| 4. Lexical items | (a) hɛlsn/ɛlˀəɹs<br>(b) *<br>(c) *<br>(d) tɔ̈wˀs/tɪws | (a) ɛləɹs<br>(b) tøl/tɔlˀ<br>(c) waɪlə<br>(d) tɔ̈wˀs | (a) ɛləɹs<br>(b) tɔlˀ<br>(c) veˀɹ<br>(d) tɔ̈wˀs/tɪws | (a) 'otherwise'<br>(b) 'twelve'<br>(c) 'weather'<br>(d) 'believe' |

Table 1. Phonetically transcribed examples of the four points under consideration by three subgroups of Thyborøn residents ('*' indicates no example currently available from the data set).

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In considering Table 1, we note that despite the compressed subset of data, we are able to locate trends in the linguistic behavior of the residents. While there are differences between the three groups' linguistic behavior, there are also a number of shared features. This is a crucial point in that we witness that the denotational code is perduring, and that the ebb and flow of change (i.e. the variability of features) is not the sole domain of any one group of residents (nor is fixed as those who subscribe to age-grading may predict). There continues to be a number of forms which index a group member's participation in the larger social grouping, the local linguistic community of Thyborøn. Examples of this are seen in the forms for: 'do', 'I', 'with', 'otherwise', 'twelve', and 'believe'.

## 5.2. The Actuation of Linguistic Change in Thyborøn

In addressing the actuation question, we turn our attention to the differences exhibited among the internally defined groups of community members. As sociolinguists, we are able to immediately pinpoint the suspected linguistic changes in, for example, the forms for: 'self', 'I', 'with', 'otherwise', and 'weather'. We notice that linguistic differences exist along the lines of both sex and age; that the Group 3 males share features with both the Group 2 and Group 3 females; and that when it comes to the most non-localized forms (i.e. what could be labeled as the most 'Standard Danish' forms), it is the Group 3 females who lead in this type of dialect change, namely in exhibiting the highest number of such forms.

These differences are certainly of interest, and together with the results of the quantitative analyses, a complete description may be presented of the synchronic state of Thyborønsk and the direction of the changes in progress. If we, as sociolinguists, wish to address the actuation question, as this paper proposes, we need to pose the following research question: *Why* are the features distributed in this way, and *what* is going on in the community to affect such change?

As discussed, we begin by exploring the question of change from a perspective which explores all the possible pressures

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from a macro-social level as being potential catalysts to the emergence of pressures at the micro-social level. The way in which the pressures are interpreted by the local linguistic community's residents, and what form their reactions to the pressures take, can only be understood after one has developed a localized socio-historical profile of the community.

I would like to offer a synopsis of an interdisciplinary examination into how the internal modes of normativity, external socio-economic pressures, the ebb and flow of historical and demographic events, macro and micro social changes, discursive interactions and social cognition, all combine to produce a cohort effect which results in the actuation of change. The interdisciplinary approach proffers a means to understanding why the social changes occurring in Thyborøn exist, and why and how these changes are reflected in linguistic change. While this certainly seems like a mouthful, I hope you will agree that the bark is worse than the bite.

In order to accomplish the aforementioned task in the remaining time, I offer the following points:

1. By the late 1800's we can talk about Thyborøn as a community because of the bonds that kept the people there despite terrible conditions and natural disasters. The physical, economic and social struggles, which the residents faced, created a sense of community by bonding them together in order to survive.

2. The economic and demographic booms experienced by the Thyborøn residents from 1920 to the late 1960's, directly impacted the various types of accommodation which occurred in the local linguistic community. The result was the emergence of a shared denotational norm, which further strengthened the residents' "social concepts of groupness" (Silverstein 1996c), similarly, their sense of "contrastive self-identification" (Labov 1972).

3. Based on the traditionally highly stratified nature of the fishing industry, a parallel stratification between

men and women's social networks arose in Thyborøn. The social constructs were influenced by the industrial constructs because Thyborøn was, and still is, a single-industry economy. Men and women would primarily develop and maintain social network ties that exhibit dramatic asymmetry, favoring same sex ties, with the exception of the immediate family.

4. Due to the local economy's strength, traditional constructs and ideologies were maintained until the 1970's, when macro-social pressures, such as oil embargoes and quota systems, drastically altered life in Thyborøn. These external pressures translated into changes in material orientation to Thyborøn. Namely, residents had to consider looking elsewhere for economic and occupational security. Additionally, the wide spread social changes of the 1960's and 70's translated into increased opportunities for women and, in turn, into changes in the social pattern behavior of Thyborøn's youngest generation.

5. Material and ideological orientations will naturally ebb and flow in their degree of strength of more versus less localized affinity. In Thyborøn, the tide has gone out. The youngest generation are balancing their inherited social understanding of the importance and pride of being a *Thyborønboere*, with the pressures from without which demand an awareness of the non-local social, economic and linguistic norms which disfavor highly localized norms.

The culmination of these five points, as well as much of the details necessarily omitted, presents us with a cohort effect in the cycles of social behavior. When individual cycles converge, defining moments in the life of the community are created. These moments are not just the points when both social and linguistic change are most likely to occur, but because they are the focal points for group identity, they are also the cause of change. Orientation to these focal points defines membership in the

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community and structures internally relevant subgroups, such as generations. These notions are necessarily complex and multidimensional. The possibility of addressing the actuation of change depends on our ability to understand the interaction of all of these factors at a more abstract level of social history. By viewing social history in all its reflexes from a more abstract and multidimensional perspective, we understand why and how society and language change.

We witness in Table 1 that the Group 3 men, whose social network patterns are more similar to traditional local norms, display the most similarities in linguistic behavior with the Group 2 women (and other older Groups not presented herein). The Group 3 females, whose social networks, personal ideologies, and linguistic attitudes are more divergent from traditional patterns, display the most non-localized linguistic behavior. However, we must recall that sociolinguistic pictures are not black and white. While it is true that the Group 3 women are leading in the number of linguistic features which are non-local, they still share important features with the other groups. Similarly, the Group 3 men exhibit this see-sawing effect, as they maintain features with highly localizable indexical value while they move towards the incorporation of the newest Thyborønsk, which shares more features with other (i.e., non local) linguistic communities.

## 6. Summary

Friedrich (1971) and Mathesius (1911) have shown that historical and dialectological variability are linked to synchronic variability across register within individual dialects. Although variability can be a key factor in diachronic and synchronic linguistic change, as shown above where the variable reflexes of a sound change also index membership in internally defined subgroups; variability is also a stable element and is inherent in language. It is important to keep in mind that the mere existence of variability does not indicate change in progress. However, the existence of linguistic variability along with notable concurrent social changes can be an indicator of change in progress.

The multidimensional model employed herein is grounded in ethnographically informed empirical studies of macro- and micro-societal data from ethnologic and social network research that shed interesting and important light on the sociolinguistic situation. Locally historicized, linguistically external evidence provide a framework for exploring linguistic change from an integrated and empirically informed perspective which offers us a means for addressing the actuation question for local linguistic communities.

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# Typologizing the Sociolinguistic Speech Community

Otto Santa Ana and Claudia Parodi

## 1. Introduction and the Mexican Setting

We propose a comprehensive hierarchical model of SPEECH COMMUNITY which can be applied to fieldwork research in both urban and non-urban domains. We focus on dialect contact in order to describe Spanish dialect distribution in contemporary Mexico as this ranges from provincial and regional Mexican Spanish to standard Mexican Spanish. The Michoacán *Bajío* is the region of our research.

Michoacán has coastline on the Pacific Ocean and is part of the western *altiplano* of Mexico. It is around the midway point of Mexico traveling north and south. One of the cities of the Bajío is Zamora, the pivot point for our study. Zamora is a regional hub of agriculture and commerce. Circling Zamora are a set of smaller towns numbering less than 40,000 people, communities of about 10,000 people, small villages and even smaller *ranchos* inhabited by one or two families of farmers.

## 2. Our Project and Findings

Our investigation involved gathering 50 hours of vernacular Mexican Spanish from a broad sample of 35 native speakers of the Zamora region of Michoacán. This data was collected with a protocol, which is in keeping with the multiple methods laid out in Labov (1984) It included sociolinguistic interviews, a battery of tests to investigate language use in different genres as well as at different levels of formality, and a series of language attitude tests. The interviews gave the impression of being informal conversation, but in fact we followed covertly structured guidelines. At times both authors interviewed a single informant, to sample a wider range of the informant's interactional responses. We also attempted to draw the individual interviewee into group conversation.

A sequence of genre, formality and attitude tests were devised to investigate other knowledge of Spanish varieties. Subjunctive constructions were tested, hypothetical constructions were sought out. Levels of formality were tested with role-playing exercises and humorous narrated skits that were pre-recorded. Decontextualized sentence pairs were presented, again to test evaluation of alternating variables. Next we asked the interviewees to compare a pair of formal and informal letters. We lastly asked a series of questions on language use and judgments. From all this data we found: different variable use patterns among different groups of Mexican Spanish speakers, and different patterns of linguistic evaluation among different groups of these speakers, based on both local (vernacular) and non-local Mexican Spanish. Moreover, some individuals demonstrated no apparent awareness of the social evaluation patterns of language variation at all. These findings indicate that more than one speech community comprise the Zamora region.

## 3. A Speech Community Typology

In our model, the shared evaluation of linguistic variables is critical. Socially marked linguistic features delimit speech communities. These features, however, do not mark out mutually exclusive grouping of speakers. In our proposal, speech communities can be seen to be arranged in sets of multiply embedded groupings of individual speakers as schematized in Figure 1.

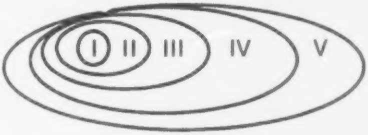

Figure 1: Speech communities schematic

In this model each speech community of Mexico is distinguished and defined in terms of binary [±] features. At the center of the model is the speaker's recognition that there is a *linguistic hierarchy* that reflects the social hierarchy in which he/she has a position. Recognition that there is a social hierarchy,

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as expressed in language, is manifest in the use and evaluation of socially-marked linguistic variables by speakers and their interlocutors. It is a given among sociolinguists that the social hierarchy is reflected in the way people talk, and that people are evaluated by the way they talk. However, such knowledge is not necessarily shared by every individual speaker. In the Bajío either the speaker recognizes that language reflects the social hierarchy or not. If the speaker does not then the speaker is a member of Nuclear Field speech community configuration of our typology; if the speaker does, then the speaker is at least a member of the Locale Field. The second element is the recognition of specific *stigmatized linguistic items* and that their appropriate use affects the way others evaluate and place a speaker in the social hierarchy. The third element is the recognition that specific *regional norms* exist and their appropriate use affects the way others evaluate and place a speaker in a social hierarchy. We see regional norms at the same time as geographical and social units, since people living in the same territory interact with and influence one another. While communicating, they evaluate each other with reference to shared regional patterns. The final element is the recognition that *standard norms* exist and their appropriate use affects the way others evaluate and place a speaker in a social hierarchy.[1]

This typology is an implicational scale. Membership in a wider community implies potential access to the sociolinguistic knowledge of the more restricted communities, but not the converse. By this we mean that awareness of a wider scope of social relations allows possible awareness of the social networks and speech communities with narrower scope. Cognizance of speech community norms does not imply use. For example, an individual who recognizes that there are stigmatized lexical items must necessarily acknowledge that there is a social hierarchy of language (of at least two levels), namely an in-group and out-group relation.

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[1] The possibility exists, of course, for a wider cross-national speech community. Evidence of the speaker's recognition of these elements of the sociolinguistic environment should be understood to be at the generally accepted unconscious but experimentally demonstrable level of awareness.

Table 1: Speech community typology

| | hierarchy | stigma | regional | standard |
|---|---|---|---|---|
| I. Nuclear | – | – | – | – |
| II. Locale | + | – | – | – |
| III. District | + | + | – | – |
| IV. Regional | + | + | + | – |
| V. National | + | + | + | + |

### 3.1. Nuclear Field

Individuals who are members of the nuclear speech community configuration move in a relatively restricted and a close-knit social network. Usually, we find speakers at the nuclear field whose social network is limited to a handful of nuclear or extended families, and very local interactions. This social network, and its isolation from the linguistic hierarchy is not a single generation accident, but has been the prevailing social structure for generations. As a consequence of this relatively restricted range, speakers of this field have no apparent awareness of the standard/non-standard opposition.

In the Bajío case, nuclear field individuals are speakers of a vernacular regional dialect of Spanish which includes, as will be shown below, many 16th century Old Spanish features. These speakers exhibit little conscious or unconscious recognition of differential use of language by other speakers, and minimally modify their speech to accommodate their interlocutor, Such speakers use informal/formal pronouns, *tu* and *usted*, with the requisite linguistic concord marking on verbs and nominal phrases in appropriate social contexts. But we noted little further linguistic accommodation in the sense of Trudgill (1986) among these speakers. They may acknowledge some variation in speech. However, they do not demonstrate knowledge of the social judgments that are made by way of such variation.

From our observations, the key factor that determines the extent of the effective social network for individuals seems to be the breadth of the economic sphere in which they actively participate. For the nuclear field individual in rural Mexico, integration into the economy of the outside world remains minimal. Contacts with the socializing and evaluative social institutions which strongly affect people's sense of self and their speech, such as schooling or work outside of the home, have been tenuous and brief. Other contacts with the larger social world are superficial, such as the passive reception of radio and television emissions. Consequently the influence of the language of the larger social environment in like manner is limited.

In the language use of the nuclear field speakers, we note a usage distinction between stigmatized words and taboo words. Stigmatized words which have no taboo content, such as nonstandard *mesmo* 'same', as opposed to standard *mismo*, will not be recognized by nuclear field speakers.[2] Likewise stigmatized pronunciations, such as a velar aspirated pronunciation of the standard /f/ in initial position of certain words are used by these speakers, with no sense that there is any proscription against this usage. Examples include *fuera* 'outside' or *herrar* 'to shoe horses' pronounced [xhwera] and [xherrar] instead of the standard pronunciation [fwera] and [erar]. On the other hand lexical items which have taboo semantic content, such as *puta* 'whore', will be recognized as a stigmatized item. Such words will be used or avoided, according to the social circumstance.

## 3.2. Locale Field

Locale field speakers recognize that the social hierarchy is expressed in linguistic variation, in terms of a standard–nonstandard opposition. These speakers are aware of their limited knowledge of the hierarchy, but they show knowledge of some stigmatized features. Locale field speakers register insecurity about their ways of speaking, and demonstrate some evaluative judgment of the ways that others speak.

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[2] The stigmatized words in Mexican Spanish are 16th century lexical items which were part of the vernacular Spanish of the first settlers of the Americas. Many, such as *haiga* and *asina/ansina* are located throughout the non-metropolitan New World (e.g. Cárdenas 1967; Rona 1973:319). These items were subsequently replaced in Latin American cities, such as Mexico City. Since there was greater interaction across metropolitan areas in Latin America, than between Mexico City and its provinces, these items are stigmatized across Latin America by metropolitan speakers. Because the provinces did not replace them, they are labeled as rural ways of speech.

These speakers recognize taboo words and variably use them as befiting the social setting. Non-taboo stigmatized *mesmo* and *ansina* forms are still used over the standard *mismo* 'same' and *así* 'in this way' forms, but there is some awareness of the stigmatized value of particular lexical items. However, most phonological features that are stigmatized by wider field speakers may remain unknown to the locale field speakers. That is, they are aware of the existence of a hierarchy, but they do not identify all the items that constitute the stigmatized features of Mexican Spanish.

The life ways of locale field speech communities involve greater social intercourse with local and regional communities. At the locale field, recognition of the social hierarchy represents an imposition on the individual of the social values of the larger local and regional world. This does not imply the automatic use of the linguistic features associated with the wider speech community values.

Locale field individuals are not tacitly knowledgeable about the full set of stigmatized lexical items of the region. In our sample their contact with the wider world became regular only during adult life. Commodity labor, which only supplements their subsistence economy, provides limited exposure to the ways of speaking in the regional world. Schooling, which is the prime socializing setting for exposure to the full set of proscribed lexical items, is not a significant part of these individuals' life history. Locale field people are more sensitive about the way they speak with outsiders. When asked to evaluate their own speech, they provide ambivalent answers. In our model this field refers to a set of families which comprise a social network. The key here is that each individual in the locale knows the other, not as a casual acquaintance but as someone whose life impacts the speaker.

### 3.3. District Field

In this speech community configuration speakers demonstrate recognition of a stable set of stigmatized features. These features include the lexical, phonological and syntactic items that are generally stigmatized by national field Mexican (and possibly all Latin American) standard Spanish speakers. Assignment to this speech community configuration will not necessarily require that individuals have complete productive control of these features, or that they generally opt to use non-stigmatized forms over stigmatized forms. Non-standard speakers are aware of the hierarchy, and the stigmatized forms that constitute it, yet they continue to use stigmatized forms, even if they may believe that they never use them,

District field speakers use the non-standard regional dialect. They show themselves to range from quite secure to insecure about the way that they speak, and how they are judged; they judge themselves as inferior speakers of their native language. Further, they judge their non-standard speech to be a personal limitation and do not see their speech to be representative of wider regional patterns.

District field speakers have attended some years of elementary school. They are involved in a wider public sphere than locale field speakers. Social interaction involves activity in a public sphere among non-acquaintances. In our sample these people own small businesses, and they interact in market activities with people who represent a wide set of social groups and various economic classes, yet they may not have lived in regions of Mexico beyond the Bajío.

### 3.4. Regional Field

At the regional field individuals are aware of the set of stigmatized items, which they tend not to use. These individuals are cognizant that they speak a regional accent, which is called a *tiple* [tí.ple]. The tiple is not used as a derogation. For Bajío residents, it means 'regional accent', which they identify with their area of origin. This may or may not lead the individual to believe that there are other regional accents. It may be that recognition of one's tiple is seen as a marked dialect, opposed to the unmarked standard Mexican Spanish. However, as the individual's life ways provide him/her with acquaintances and contacts from a wider range of Mexican people, knowledge of a range of regional dialects can be developed.

### 3.5. National Field

At the national speech community configuration, individuals are fully cognizant of the regional features of their home region, but they infrequently use them. They prefer standard forms. They may not want to acknowledge any ability to use such features, when asked directly. Some national field individuals consider certain marked regional pronunciations to be non-standard, but these features are not stigmatized. A mild version of the regional pronunciation features might be used by standard Mexican Spanish speakers as indicators of casual and intimate speech.

They are fully aware of the social hierarchy and their privileged place. The judgment of such individuals usually is that non-standard speakers (from nuclear to regional) are regrettably "limited" by their pronunciation and ignorance of the single "correct" way of speaking. This is particularly apparent in certain strata of Mexican society which is most influenced by its language academy tradition. As people at the top of the social hierarchy, these national field speakers tend to be in positions of power to impose their biases on their hierarchical subordinates.

## 4. Michoacán Spanish Elements of the Typology

In this section we address the main varieties of Spanish upon which this typology is drawn: stigmatized; regional Mexican; and standard Mexican Spanish.

Stigmatized Spanish is constituted by lexical, phonological and morphological remnants of the old American Spanish koiné that was formed in the New World during the 16th century (see Cárdenas 1967; Parodi 1995:39) Native speakers are not aware of the fact that stigmatized forms are residues of the old koiné. They simply label them as rural or uneducated speech. In school, for example, these forms are censured. Since they reflect parts of an older stage of Latin American Spanish language, the features are not peculiar to Michoacán and are found in other areas of Mexico and Latin America where they are stigmatized among speakers of district, region and national fields. The following words, as used by our Bajío informants, exemplify stigmatized speech: *fueron* [xhweron] 'they went', *asegun*, 'according to', *pader* 'wall', *asina* or *ansina* 'this way', *probe* 'poor', *bia* 'there was', *naiden* 'no one', *haiga* 'there is', *mesma* 'the same', *aigre* 'air', etc.

Regional Mexican Spanish is composed of lexical and phonological items that are recognized by Mexican speakers as identifying native speakers of a certain region. The features are not stigmatized, rather they are *indicators* of the native region of a speaker in the sense of Labov (1972) Some of the regional features characteristic of Michoacán are also found in other areas of Mexico and Latin America. What distinguishes Michoacán speakers from the speakers of the other areas is the use of a specific set of features. Some of these features are the following: close vowels, for example *calle* [kayi] 'street', *pocos* [pokus] 'few', weakening of /y/ and /tʃ/, as exemplified by *caballo* [kabaju] 'horse' and *leche* [leʃi] 'milk'. We heard discursive forms, including a nasal off-glide after /s/. Thus, *pues* 'well then' is variably pronounced [pwesN]. There is also the form [ey] with a high rising intonation, which is used in conversation as a sublexical acknowledgment, approval, or simply to say 'yes'. Further, there is a particular set of intonational patterns, for which people of the region have a term we have mentioned earlier, a *tiple* (see also Cárdenas 1967, Moreno de Alba 1988)

Standard Mexican Spanish, as any standard variety, is regarded as the form of speech of educated speakers. It is taught in schools, and it is used in the written texts throughout Mexico. The Mexican standard is a variety of Modern Spanish. That is, Mexican standard Spanish has certain features that are accepted by educated Spanish speakers throughout the Hispanic world. Some of these features include: *seseo*, or the lack of the opposition between /s/ and the voiceless interdental fricative; *yeismo*, or the lack of the opposition between the palatal lateral and /y/; the use of the pronoun *ustedes* for formal and informal speech, since the pronoun *vosotros* for the informal second person has been lost; peculiar use of the preposition *hasta* 'since', etc.

## 5. Conclusion

We proposed a typology of speech communities in five fields from most local to most expanded configuration. Our typology is a comprehensive model of speech communities that utilizes Labov's (1972) shared linguistic evaluation criterion, and the notions of linguistic hierarchy; stigmatized linguistic feature; regional linguistic feature; and, standard linguistic features. No other mechanisms are posited to motivate the model, which is an attempt to describe the various language settings of a non-metropolitan community. It is also a typology that may be extended to all speech communities to characterize the different relationships that individuals can have in communities.

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# Symbolic Identity and Language Change: A Comparative Analysis of Post-Insular /ay/ and /aw/

Natalie Schilling-Estes and Walt Wolfram

## 1. Introduction[*]

The study of moribund dialects on the Outer Banks of North Carolina over the past few years (e.g., Wolfram and Schilling-Estes 1995; Schilling-Estes 1996; Wolfram and Schilling-Estes 1996, Wolfram, Hazen, and Schilling-Estes forthcoming) has tempted us to assume that a generalized model of dialect recession might apply to receding dialects. Our study of dialect change on the island of Ocracoke, North Carolina, supported for the most part a DISSIPATION MODEL, in which traditional dialect features are simply lost or drastically eroded in the post-insular state of an historically isolated variety. The examination of another post-insular Outer Banks island community, Harkers Island (Cheek 1995; Wolfram, Cheek, and Hammond 1996) supported the dissipation model, allowing for minor changes in the regression slope of erosion. It is important, however, to challenge the assumptions of the dissipation model based on a variety of different post-insular dialect situations. Therefore, in this investigation, we examine a quite different post-insular community, Smith Island, Maryland. Our examination will demonstrate that there may be significant diversity in how post-insular dialects recede. In fact, we show that the moribund state of some language varieties may be characterized by a CONCENTRATION MODEL of dialect recession in which features actually intensify rather than dissipate as the variety dies.

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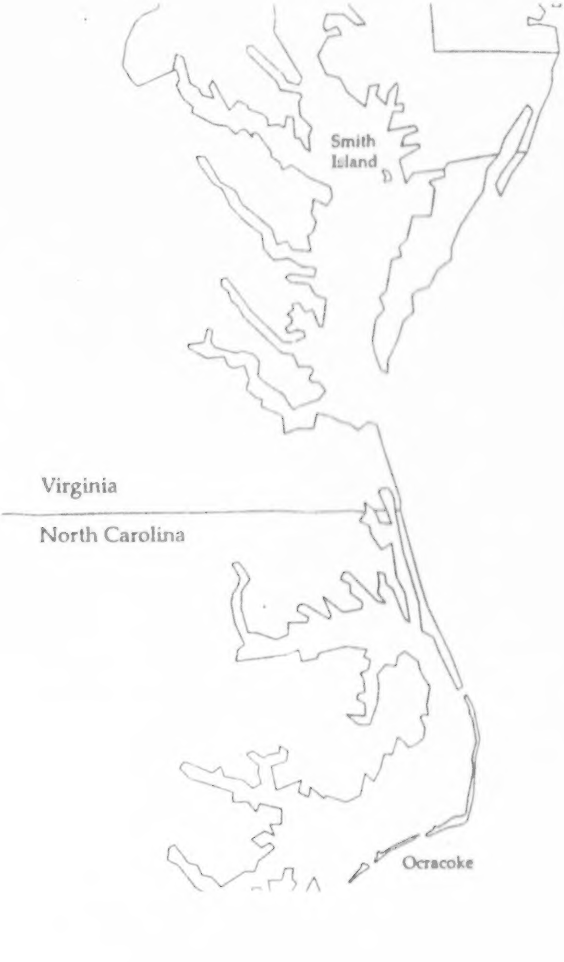
Figure 1. The Location of Smith Island and Ocracoke


Smith Island
Virginia
North Carolina
Ocracoke

Several of our previous discussions have focused on the well-known production of /ay/ with a raised and backed nucleus [ʌ˃I] in Ocracoke English (Wolfram and Schilling-Estes 1995, 1996; Schilling-Estes 1996). In this investigation, we focus on the production of /ay/ in Smith Island, which is realized with a raised, centralized nucleus, and compare it with the Ocracoke raised and backed variant. We also investigate the patterning of the /aw/ diphthong, the back upgliding diphthong that parallels front upgliding /ay/. As we shall see, /aw/ may be realized with a raised and/or fronted nucleus as well as a fronted glide in both Ocracoke and Smith Island.

The data from Smith Island are drawn from a set of cross-generational sociolinguistic interviews with 42 islanders conducted by Rebecca Setliff in the early 1980s, while the Ocracoke data are drawn from the 70-plus interviews we have collected there to date, beginning in the early 1990s. Figure 1 shows the locations of Ocracoke and Smith Island in relation to each other.

Smith Island is located in the Chesapeake Bay, about 10 miles from the mainland Delmarva Peninsula. Like Ocracoke, which is located 20 miles from the mainland of North Carolina, Smith Island has been accessible only by boat since its first British inhabitants settled there in the latter half of the 1600s. Although both islands have historically been isolated from mainland communities, they are currently undergoing significant social and economic change. The characteristics of each island's transformation are summarized in (1) and (2) below.

(1) The Socioeconomic Transformation of Ocracoke

- Two and a half centuries of geographic isolation are brought to a sudden end in the 1950s with the implementation of a state-run ferry service and the construction of a paved highway that runs the length of the island.
- Ancestral islanders (approximately 350) become a minority population on the island, as tourists from the mainland vacation there, and other mainlanders establish permanent and vacation residences on the island. Currently, approximately 3,000 to 5,000 tourists per day visit Ocracoke during the tourist season, while 400

mainlanders have set up homes on the island.

- The economic base shifts from a relatively self-sufficient marine-based economy to one heavily dependent on the tourist trade.
- Social networks extend beyond the confines of the island as Ocracokers come into more contact with outsiders; marriage with mainlanders becomes more commonplace, as do working and other social relationships.

(2) The Socioeconomic Transformation of Smith Island

- The land mass of the island shrinks significantly, at a rate of over 1,000 acres of loss in less than a century.
- The population declines significantly, from almost 700 in 1960 to about 450 in 1990.
- Traditional occupations such as crabbing and oystering decline, forcing islanders to move off the island to seek alternative means of sustenance.
- Tourism is a minor trade, and there is little in-migration.
- Social networks are restricted for islanders who continue to live on the island.

A couple of noteworthy contrasts are found in the Smith Island and Ocracoke situations, including the nature of the population shifts, socioeconomic changes and alterations to interactional networks affecting each community. Over the past several decades, Smith Island has lost over a third of its population as its marine-based economy declines, thus forcing islanders to seek work on the mainland. Meanwhile, Ocracoke has grown steadily as its traditional marine-based economy is supplanted by tourism. Regular interaction between outsiders and islanders is quite limited on Smith Island, whereas the expanding service-based industry on Ocracoke is characterized by increased intermingling between outsiders and Ocracokers. The differential sociohistorical and socioeconomic situations lead us to ask obvious questions regarding the process of language change in these two communities: How is language change proceeding in these two island communities? What can a comparison of these two situations tell us about generalized models of language recession? How do linguistic and sociocultural factors converge in the explication of principles of language change and recession?

In the following sections, we consider these questions by examining two diagnostic diphthongs in Smith Island and Ocracoke, namely /ay/ and /aw/. The variable patterning of each of these diphthongs is changing in each community in significant but different ways. The explanation for their differential diachronic patterning is not reducible to a simple matter of linguistic process or sociohistorical circumstance. Instead, our explication demonstrates how linguistic principles and sociocultural factors intersect to account for patterns of dialect change and recession.

## 2. The Contrasting Directionality of /ay/

Our previous studies of dialect recession in Ocracoke English indicated that a number of traditional dialect features, including raised, backed /ay/, have receded rather dramatically over the course of the past several generations (Wolfram and Schilling-Estes 1995; Schilling-Estes 1996). How does this recession compare with the patterning of /ay/ on Smith Island, where /ay/ may be realized with a raised nucleus as well? Results of our comparative quantitative analysis of the diachronic and synchronic patterning of raised /ay/ in Ocracoke and Smith Island are summarized in Tables 1 and 2. Raw percentages for the incidence of the raised variant of /ay/ in Smith Island are given in Table 1. Raw figures are not given for Ocracoke, since they have been provided in our previous descriptions of Ocracoke /ay/ (Wolfram and Schilling-Estes 1995; Schilling-Estes 1996). VARBRUL results for Ocracoke and Smith Island are given in Table 2. Figure 2 provides a graphic display of the comparative diachronic patterning of /ay/ raising in prevoiceless and prevoiced environments.

Two noteworthy contrasts are evident from the comparison of Smith Island and Ocracoke /ay/ raising provided in Table 2 and Figure 2. First, is the direction of change. Instead of showing a decline for /ay/ raising/backing, as in Ocracoke, Smith Island shows a significant increase in raised /ay/. This increase hardly appears to be a temporary revitalization before an inevitable decline, as we have found with raised /ay/ for certain middle-aged

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Table 1. The Variable Patterning of Raised /ay/ on Smith Island

| | | Vl. Obstr. | | Vd. Obstr. | | Nasal | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| | | [ʌI] | Tot | [ʌI] | Tot | [ʌI] | Tot | [ʌI] | Tot |
| Older Males (3) Age 55+ | N | 87 | 190 | 23 | 86 | 28 | 132 | 138 | 408 |
| | % | 45.8 | | 26.7 | | 21.2 | | 33.8 | |
| Older Females (2) Age 55+ | N | 10 | 77 | 1 | 32 | 5 | 63 | 16 | 172 |
| | % | 13.0 | | 3.1 | | 7.9 | | 9.3 | |
| Middle-Aged Males (4) Age 25-54 | N | 40 | 113 | 8 | 72 | 11 | 71 | 69 | 256 |
| | % | 35.4 | | 5.0 | | 15.5 | | 27.0 | |
| Middle-Aged Females (3) Age 25-54 | N | 107 | 162 | 2 | 62 | 26 | 105 | 155 | 329 |
| | % | 66.0 | | 5.5 | | 24.8 | | 47.1 | |
| Young Males (5) Age 13-24 | N | 124 | 176 | 7 | 72 | 21 | 106 | 172 | 354 |
| | % | 70.5 | | 7.5 | | 19.8 | | 48.6 | |
| Young Females (7) Age 12-24 | N | 111 | 180 | 9 | 71 | 25 | 120 | 155 | 371 |
| | % | 61.7 | | 6.8 | | 20.8 | | 41.8 | |
| Totals, All Speakers (24) | N | 479 | 898 | 10 | 395 | 116 | 597 | 705 | 1890 |
| | % | 53.3 | | 7.8 | | 19.4 | | 37.3 | |

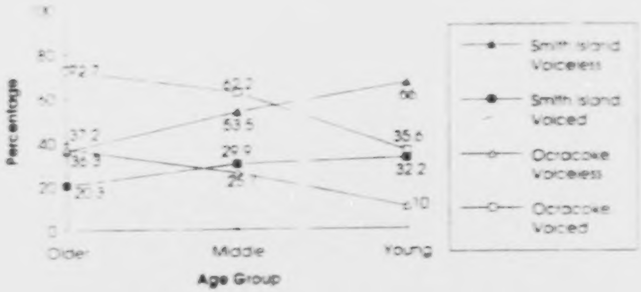
men in Ocracoke (Wolfram and Schilling-Estes 1995). Instead, it appears to represent a robust change in progress, as evidenced by the steadily increasing usage levels for raised /ay/ among middle-aged and younger Smith Islanders.

Second is the differential ordering of phonological constraints affecting /ay/ raising in each community. Although the

Table 2. VARBRUL Results for /ay/ Raising: Smith Island and Ocracoke

| **Ocracoke Raising, VARBRUL Results** | **Smith Island Raising, VARBRUL Results** |
|---|---|
| Input Probability = .41 | Input Probability = .36 |
| Age Group: | Age: |
| Older = .63 | Older = .38 |
| Middle-Aged = .51 | Middle-Aged = .52 |
| Younger = .32 | Young = .59 |
| Following Segment: | Following Segment: |
| Nasal = .56 | Nasal = .30 |
| Vd. Obs. = .71 | Vd. Obs. = .41 |
| Vl. Obs. = .33 | Vl. Obs. = .67 |
| Chi-Square per cell = .221 | Chi-Square per cell = 1.356 |

Figure 2. The Patterning of Raised /ay/ over Time



backed, raised variant is favored in prevoiced environments in Ocracoke, in Smith Island raising is favored in prevoiceless contexts and disfavored in the prevoiced environment, just as is /ay/ raising in Canadian English and a number of U.S. varieties (Labov 1963; Chambers 1973). The contrasting constraint orders may be explained by pointing to the fact that the Ocracoke variant is backed as well as raised, while the Smith Island raised variant seems relatively centralized. In other words, Ocracoke raised /ay/, phonetically more like [ʌ$^{>ɪ}$], is located in peripheral vowel space, while Smith Island raised /ay/, located in the phonetic space of [ə$^{ɪ}$], could be considered nonperipheral. We have proposed (Wolfram and Schilling-Estes 1995) that peripheral and non-peripheral vowels may display mirror image constraint orderings in terms of the sonority hierarchy; thus, raised, backed [ʌ$^{>ɪ}$] is more frequent in prevoiced position in Ocracoke but raised and centralized [ə$^{ɪ}$] is more frequent in the prevoiceless environment in varieties such as Smith Island English and Canadian English.

There is another way in which Smith Island differs from Ocracoke with respect to /ay/. We have noted that in Ocracoke, raised and backed [ʌ$^{>ɪ}$] is a symbolic icon and the object of countless comments by outsiders and islanders. It is also highlighted in performances of the dialect (Schilling-Estes 1995, 1996). In Smith Island, however, raised /ay/ goes virtually unnoticed, despite its dramatic increase in island speech. As we discuss below, the realization of /aw/ with a fronted glide displays the opposite patterning in terms of social salience in the two island communities: Fronted /aw/ serves as a stereotype in Smith Island, where everybody talks about it. In Ocracoke, /aw/ is a marker but not a stereotype, and few islanders comment on it in their discussions of island speech.

## 3. The Patterning of /aw/ in Ocracoke and Smith Island

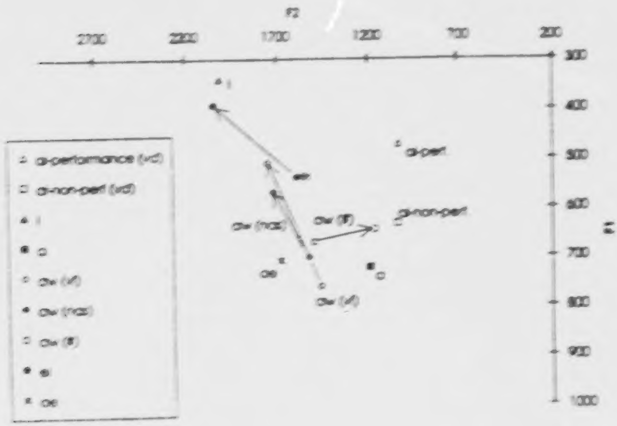
Our incipient qualitative and quantitative analysis of /aw/ in Ocracoke and Smith Island addresses several issues central to the comparative investigation of dialect change in moribund dialects. We are obviously concerned with cross-dialectal comparison of changes in /aw/ and /ay/ in Smith Island and Ocracoke. We are further concerned with how these two diphthongs compare with each other synchronically and diachronically as part of the diphthongal subsystem of English. And finally, we are interested in the consequences of the differential symbolic status ascribed to /aw/ and /ay/ in these two communities.

Thus far, we have extracted data on /aw/ for 10 speakers representing three generations of speakers from Smith Island and seven representative speakers from our Ocracoke sample. In our initial attempts to delimit possible variants of the nucleus and glide of /aw/, we posited that variants of the nucleus might be categorized along the raised-unraised or fronted-unfronted dimensions and that glides might be categorized as fronted, non-fronted, or absent (when /aw/ is realized as a monophthong). Given that the fronting of the glide of /aw/ is considered to be contingent upon the fronting of the nucleus which pulls the glide along with it (Labov, Yaeger and Steiner 1972), we might expect that variants of the /aw/ nucleus would always accompany a fronted glide. However, preliminary spectrographic analysis has led us to call this assumption into question. We are even questioning the categorization of variants of the nucleus in terms of binary classifications such as raised/unraised, and fronted/non-fronted, as well as the salience of these distinctions for islanders, since no clear patterns in terms of the /aw/ nucleus with respect to these either of these two dimensions have yet emerged in our spectrographic analysis. However, the distinction between fronted and non-fronted glides seems relatively clear.

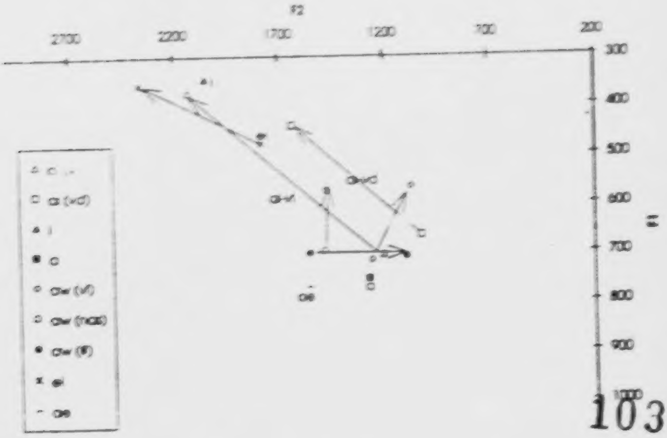
In Figure 3, partial vowel charts based on our spectrographic analysis are given for two speakers from Ocracoke; and in Figure 4, partial vowel charts are given for two speakers from Smith Island. The two Ocracoke speakers are a 39-year-old male and an 18-year-old male; the two Smith Islanders are a 41-year-old female and a 15-year-old female. Points represent mean F1 and F2 values for several tokens of each vowel. Measurements are given for several different types of phonetic environments, including prevoiceless (e.g. *house, out*), prenasal (e.g. *down, brown*) and word-final ((e.g. *how, now*). Other vowels (e.g. /i/,/e/,/æ/, and /a/) are given as anchor points for situating the production of /aw/.

Figure 3. The Positioning of /aw/ and /ay/ in Ocracoke

a. RO, 39-year-old male



b. BB, 18-year-old male



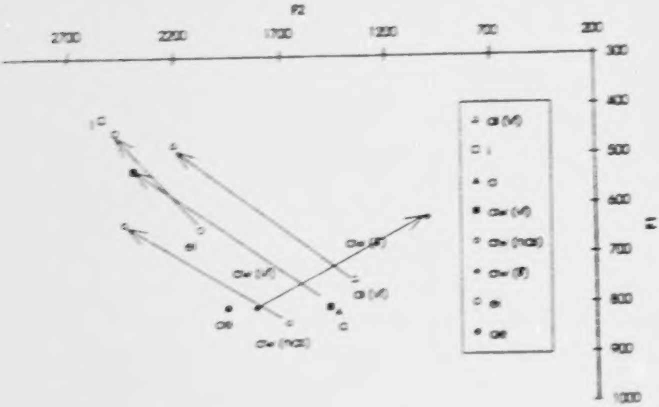
The spectrographic analysis for the 39-year-old Ocracoker whose vowel chart is given in Figure 3a reveals fronting of the /aw/ nucleus and glide in prevoiceless and prenasal position. Incidentally, this speaker also happens to be one of the middle-aged men in our Ocracoke sample who shows high usage levels for raised /ay/; in fact, he is Rex O'Neal, the speaker whose exaggerated /ay/ raising is highlighted in Schilling-Estes' (1995, 1996) discussions of "performance" speech. Although we might maintain that Rex's fronting of the /aw/ nucleus is simply a reflection of his generalized fronting of back vowels, as indicated by a complete spectrographic analysis of his vowel system by Erik Thomas, the fact that the /aw/ glide in word-final position is quite far back causes us to question this assumption. The back-gliding of word-final /aw/ is categorical for all speakers in Ocracoke and Smith Island that we have so far examined, even those with extensive front gliding of /aw/ in other environments. This suggests that /aw/ has undergone an allophonic split.

The 18-year-old Ocracoke speaker whose vowels are plotted in Figure 3b shows a fairly typical pattern for a younger speaker with respect to /aw/ gliding in Ocracoke. The trajectory of his glide is backward regardless of the following phonetic environment, except in prenasal position, where /aw/ is sometimes unglided. Interestingly, this speaker is atypical of younger islanders in terms of /ay/ raising. Despite his lack of the distinctive island /aw/ variant, he is one of the few younger speakers in our sample who shows significant usage levels for the distinctive /ay/ variant (about 40 percent). We hypothesize that this selective pattern of retention—keeping the traditional Ocracoke [ʌ$^{\text{ɪ}}$] but losing the distinctive /aw/—is one manifestation of the differential symbolic status ascribed to /ay/ and /aw/ in Ocracoke. Those seeking to project their status as islanders through language may preserve raised, backed /ay/, while glide-fronted /aw/ readily gives way to the mainland back-glided variant [a$^{\text{ʊ}}$].

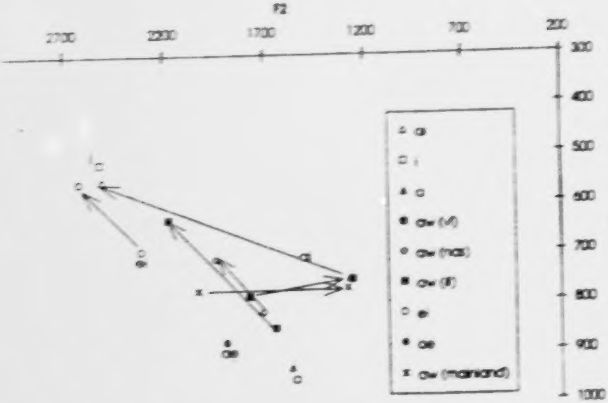
The positioning of the nucleus and glide of /ay/ for Smith Islanders is indicated in the representative vowel charts in Figure 4. The first speaker, a 41-year-old female, indicates some nucleus fronting, particularly in the prenasal environment, but not much raising of the nucleus. The fronted trajectory of her glide, however, is clearly evident, even in environments where a fronted

Figure 4. The Positioning of /aw/ and /ay/ in Smith Island

a. JK, 41-year-old female



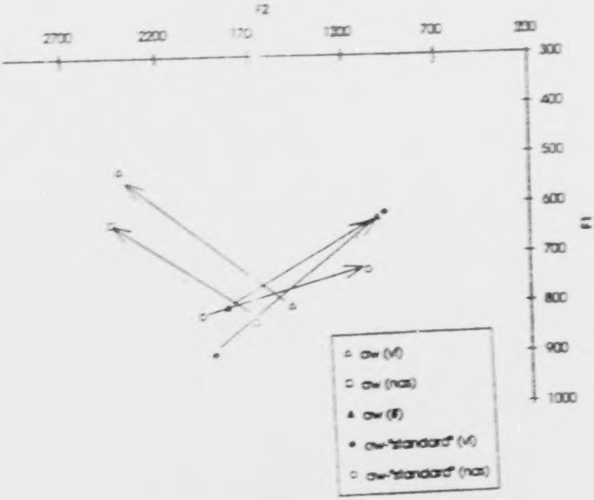
b. DE, 15-year-old female



nucleus is not evident, for example, in prevoiceless position. Thus, it appears that glide fronting may not be phonetically contingent upon nucleus fronting, as suggested, for example, in Labov, Yaeger, and Steiner (1972). Another possible explanation for this apparent incongruence is that the social marking of /aw/ in Smith Island has led speakers to seize on a phonetically unnatural variant, because such a variant may be more noticeable than a phonetically expected one.

There are two cases in which JK, the speaker in Figure 4a, does not produce clearly fronted glides. First, the /aw/ glide shows a backward trajectory in word-final position, as it did for the Ocracoke speakers represented in Figure 3. Second, /aw/ is back-glided in prevoiceless and prenasal environments when JK demonstrates /aw/ vowels that are different from her own—for example, those of her mother. The positioning of the nucleus and glide of these tokens relative to JK's ordinary conversational tokens is given in Figure 5.

Figure 5. Demonstrating Smith Island and Mainland /aw/



The role of /aw/ in linguistic demonstration is indicative of its salience in Smith Island, especially in contrast with the relatively non-salient /ay/ diphthong. For example, consider the following excerpt from JK's sociolinguistic interview. In this passage, JK is discussing her mother's lack of glide-fronting for /aw/ compared with her own use. The phonetic production of each case of /aw/ and /ay/ in the conversation is given in broad transcription Glide-fronted /aw/ is represented as [æ$^{I}$]; nucleus-raised /ay/ would be represented as [ə$^{I}$], if it had occurred in this passage.

(3) JK: Well, my mother was from Tylerton. I say, um, **house** [hæ$^{I}$s], **brown** [bræ$^{I}$n], you know, just as flat and broad as it can be. But they—she still says **house** [ha$^{U}$s] and **brown** [bra$^{U}$n].

FW: Just like—like I would.

JK: Yeah, mmhmm. They say it **down** [dæ$^{I}$n] there … **down** [dæ$^{I}$n], **down** [da$^{U}$n]. I don't know if she says—I don't know about **down** [dæ$^{I}$n]. I know about **house** [ha$^{U}$s]. I know about that.

FW: Now she would say, just like this: Would she say **house** [ha$^{U}$s]?

JK: Uhhuh. Yep. And I say **house** [hæ$^{I}$s]. I heard her say **house** [ha$^{U}$s], but I say house [hæ$^{I}$s]. Cause that's how Tylerton says that. I can pick up a—I don't know how to say it, up at Rhodes Point, it seems like they say—use the long uh /ay/ [a$^{I}$]. Like I say **pie** [pa$^{I}$]. And maybe that's right, but it's like they go **pie** [pa$^{I}$]. It's like a long /ay/ or something in there. I can just pick it up. I don't even know if I'm saying..

FW: You can't necessarily copy it, but you can hear it.

JK: No, no, I can't say it.

The conversation shows that JK is quite proficient in producing different variants of /aw/, including the glide-fronted variant that typifies Smith Island speech. However, she fails in her attempts to produce different /ay/ variants, even though she insists that she can hear them. Most likely, her ability to demonstrate variants of /aw/ but not /ay/ is indicative of a greater awareness of /aw/ and its variant realizations. The conversation also indicates that JK is aware that glide-fronted /aw/ is more prevalent in the speech of middle-aged islanders such as herself than older islanders such as her mother.

The younger Smith Islander, DE, whose partial vowel chart is given in Figure 4b, shows a pattern similar to the middle-aged speaker in terms of her /aw/ production; she indicates generalized glide-fronting for /aw/, except in word-final position. Her nucleus appears more raised than the middle-aged speaker's, yet it is not clearly fronted. At this point, we are uncertain whether to categorize the raising of the /aw/ nucleus in Smith Island as a fronted and raised variant which is part of the Southern Vowel Shift or as a centralized raised variant which represents a retrograde movement, as in Martha's Vineyard English (1963) or Canadian English (Chambers 1973). We are not even sure that such a categorization is relevant to the social marking of /aw/, since it appears to be the trajectory of the glide rather than the position of the nucleus which makes Smith Island /aw/ so noticeable to islanders and outsiders.

Like the middle-aged Smith Islander, the 15-year-old islander produces a backed glide for /aw/ in demonstrating mainland /aw/ variants, while the front-glided variant is prevalent in other contexts. In fact, her glide fronting is so prevalent that it sometimes leads to real-life cross-dialectal misinterpretation. Consider, for example, DE's report of confusion concerning /aw/ that took place in the mainland town of Salisbury, Maryland. The conversation in (4) takes place between the fieldworker (FW) and two Smith Islanders (LAE and DE) who were 13 and 15, respectively, at the time of the interview.

(4) LAE: We say **down** [dæ$^{I}$n] and **south** [sæ$^{I}$θ] and all that; we don't say it the way you talk—I don't know how to say it.
FW: **Down** [da$^{U}$n] and **sound** [sa$^{U}$nd].
LAE: Yeah, like that.
DE: One time I was in the Salisbury Mall, and I had this **brown** [bræ$^{I}$n] pocketbook. And I went in the shoe store, and I left it in there, and I went in there and

told that man, I said, "Have you seen a **brown** [bræ$^{I}$n] pocketbook in here?" He couldn't understand me, how I said it. And he went back there and got—he understood 'pocketbook'. He went back there and he said, "Is this yours?" I said, "Yeah."

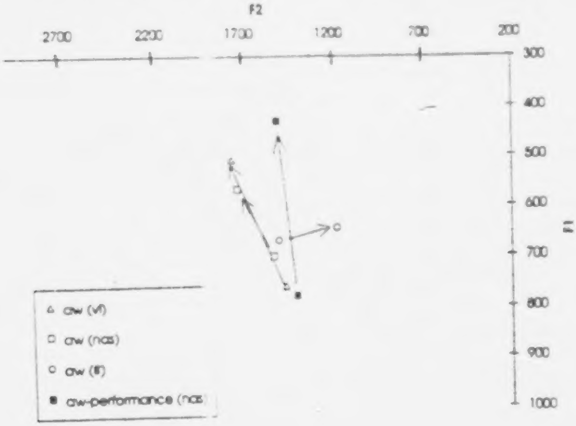
FW: Did you point to it and say, "See? See what color it is?"

DE: Yeah. I tried to talk—I said **brown** [bra$^{U}$n]. I couldn't say it good; he still couldn't understand me.

The young speakers in this interview, like the 41-year-old speaker cited above, manipulates the glide-fronted and non-glide-fronted variants of /aw/ fairly readily, indicating greater awareness of /ay/ variants than those of /ay/. There are a number of discussions of /aw/ like this one and the one in (3) in the Smith Island interviews, as well as observations by outsiders about this feature. By contrast, there is relatively little overt discussion of /ay/, and islanders do not seem to be able to demonstrate the raised variant [∂$^{I}$] which is becoming more and more prevalent in their speech. In other words, these speakers are not able to demonstrate their awareness of the [∂$^{I}$] variant either through direct comment or through what Preston (1996) refers to as "definition by ostentation."

Conversely, Ocracokers are quick to demonstrate what it is that is unique about their /ay/ vowel while ignoring /aw/. For example, Rex O'Neal, the speaker of the Ocracoke dialect studied in Schilling-Estes' examination of performance speech (1995, 1996) indicates greater height for the nucleus of /ay/ in speech performances than in non-performance speech. Although his stock performance phrase, *It's hoi toide on the sound soide* 'It's high tide on the sound side', also contains an /aw/ vowel in addition to three /ay/'s, spectrographic measurements reveal that he is not able to seize on the feature of /aw/ glide-fronting in his speech performances. In fact, his performance production of /aw/ is actually less glide-fronted than his production of /aw/ in ordinary conversation during his sociolinguistic interview. Measurements for /aw/ in Rex's performance and non-performance speech are given in Figure 6.

Figure 6. Ocracoke /aw/: Performance and Non-performance



A preliminary quantitative analysis of glide-fronted /aw/ based on 10 Smith Island and seven Ocracoke speakers reveals a contrast between Ocracoke and Smith Island as dramatic as that indicated by our quantitative analysis of /ay/. In Tables 3 and 4, we present raw figures and VARBRUL analysis results for /aw/ glide-fronting in the two communities. A graphic comparison is given in Figure 7. The internal factor group is following environment, which is limited to prevoiceless and prenasal environments because there are very few examples of prevoiced /aw/.

The results of our preliminary quantitative analysis indicate that glide-fronted /aw/ is increasing dramatically on Smith Island, particularly between old and middle-aged speakers but also between middle-aged and younger speakers. Thus, the move toward /aw/-fronting appears to represent a robust, rapid language change in progress.

Conversely, there has been a rapid decline in glide-fronted /aw/ on Ocracoke. At this point, we are not quite sure what to make of the fact that middle-aged Ocracokers display a higher incidence of glide-fronted /aw/ than older speakers. One possibility is that a change in progress toward increased fronting was abandoned in the face of competition from mainland /aw/. In light of the small sample of speakers and the high Chi-square per cell scores (3.149) indicated in our VARBRUL analysis, we are hesitant to draw any definite conclusions at this point. What is clear from our analysis thus far, however, is that glide-fronted /aw/ is drastically receding without fanfare in Ocracoke while it is rapidly expanding in Smith Island—with considerable fanfare.

Table 3. The Variable Patterning of Glide-Fronted /aw/

a. Raw Figures: Ocracoke

| *Age Group* | *Prevoiceless*<br>No. Front/Tot.<br>% Fronted | *Prenasal*<br>No.Front/Tot.<br>% Fronted | *Total*<br>No. Front/Tot.<br>% Fronted |
|---|---|---|---|
| Older | 7/79<br>8.9% | 6/52<br>11.5% | 13/131<br>9.9% |
| Middle-Aged | 12/81<br>14.8% | 16/67<br>23.9% | 28/148<br>18.9% |
| Younger | 3/82<br>3.7% | 0/73<br>0.0% | 3/155<br>2.0% |

b. Raw Figures: Smith Island

| *Age Group* | *Prevoiceless*<br>No. Front/Tot.<br>% Fronted | *Prenasal*<br>No.Front/Tot.<br>% Fronted | *Total*<br>No. Front/Tot.<br>% Fronted |
|---|---|---|---|
| Older | 0/69<br>0.0% | 1/40<br>3.0% | 1/109<br>1.0% |
| Middle-Aged | 64/126<br>50.8% | 40/69<br>58.0% | 104/195<br>53.3% |
| Younger | 62/93<br>66.7% | 32/36<br>88.9% | 94/129<br>72.9% |

Table 4. VARBRUL Results for /aw/ glide-fronting

**VARBRUL Results:**
**Ocracoke**

Application = glide fronting
Input Probability = .07

Age Group:
Older = .62
Middle-aged = .75
Young = .19

Sex:
Female = .36
Male = .65

Following Environment:
Voiceless Obstruent = .46
Nasal = .56

Chi-square per cell = 3.149

**VARBRUL Results:**
**Smith Island**

Application = glide fronting
Input Probability = .30

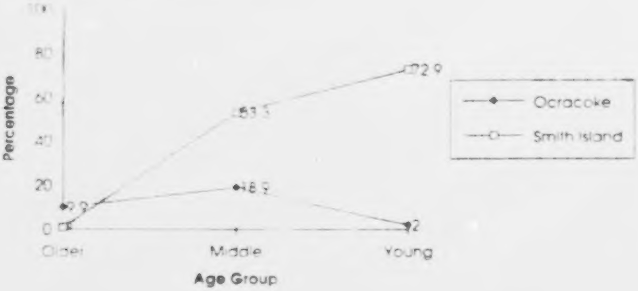
Age Group:
Older = .02
Middle-aged = .74
Young = .84

Sex:
Female = .76
Male = .24

Following Environment:
Voiceless Obstruent = .44
Nasal = .61

Chi-square per cell = 1.359

Figure 7. The Patterning of Glide-Fronted /aw/ Over Time in Ocracoke and Smith Island



## 4. Conclusion

The examination of /ay/ and /aw/ in Ocracoke English and Smith Island English has shown that cross-dialectal variants that appear, at first glance, to be somewhat similar may turn out to be quite different in terms of (1) their status within their respective vowel system configurations, (2) the directionality of the linguistic change affecting the variants, and (3) the social embedding and evaluation of the linguistic changes taking place. With respect to the status of /ay/ and /aw/ within the Ocracoke and Smith Island vowel systems, we see differences in peripherality, at least for /ay/. Raised /ay/ in Ocracoke is located in peripheral vowel space, while Smith Island raised /ay/ is non-peripheral. This differential status with respect to peripherality most likely explains the differential ordering of constraints affecting /ay/ raising in the two varieties.

We were also struck by the fact that, whereas Ocracoke /ay/ nucleus-raising and /aw/ glide-fronting appear to be part of the expected continuation of the Southern Vowel Shift, Smith Island /ay/ raising seems to be a retrograde movement, just like Canadian Raising and Martha's Vineyard raising. It may be that varieties undergoing death by concentration are more prone to initiate retrograde movements than those undergoing death by dissipation—perhaps as a defense against the outside language variants that win out in communities like Ocracoke.

The differential social marking of /ay/ and /aw/ in Ocracoke and Smith Island also seems to have an effect on the progression of change. The recession of /ay/ backing/raising in Ocracoke has been shown to be somewhat irregular, both in terms of its change slope and its phonetic conditioning. Meanwhile, the more socially unobtrusive marker /aw/ seems to be receding in a regular way. On Smith Island, raised /ay/ is increasing steadily and straightforwardly, in a phonetically natural manner. However, the more obtrusive /aw/ shows no clear pattern in the directionality of the movement of its nucleus; and it appears that the glide may be fronted independently of the nucleus—a phenomenon which is quite unexpected, phonetically. We suggest further that there will be a difference in the stylistic manipulation of changing dialect features based on their symbolic role and their level of consciousness. Ocracokers indicate "definition by ostentation" for /ay/ but not for /aw/, while Smith Islanders apparently show the converse. Thus, the symbolic meaning of dialect features has important implications for stylistic manipulation in dialect change and death.

Our examination of /aw/ and /ay/ demonstrates that the dissipation model of dialect death is not applicable to all endangered dialect situations. Dialect recession in Smith Island seems to be characterized by CONCENTRATION or INTENSIFICATION, in which the dialect actually gains in strength as it loses speakers, leading to a sort of 'survival of the dialect fittest.' We are impressed with how rapidly raised /ay/ and glide-fronted /aw/ in Ocracoke are fading; for Smith Island, we are impressed with how fast the changes toward glide-fronted /aw/ and raised /ay/ are progressing. Dialect endangerment due to the loss of speakers rather than extended contact with speakers of other dialects may lead to the compressed intensification of structures, just as linguistic swamping may lead to a rapid loss of features.

Before we confronted the case of dialect intensification in Smith Island, we were not aware that post-insular dialects could become so distinctive as they moved towards death. We were not alone in this belief. Despite the apparent awareness of Smith Islanders that glide-fronted /aw/ is expanding in their community, as evidenced in the excerpt in (3), other comments from interviews suggest that Smith Islanders firmly believe that their dialect is becoming diluted as it dies. Sometimes, however, contrary to popular opinion and scholarly belief, the more things seem the same, the more they may actually differ.

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# The Geolinguistics of a Sound Change in Progress: /l/ Vocalization in Australia

Barbara M. Horvath and Ronald J. Horvath

## 1. Introduction

A preliminary Goldvarb analysis of a sound change in progress in Australian English, the vocalization of /l/, was reported at NWAVE 24 (see Borowsky and Horvath 1997). The report was based on data collected in Adelaide, South Australia. In that report Optimality Theory is used to explain the variable linguistic patterns and in a paper delivered at the Australian Linguistic Society (Borowsky and Horvath 1996), we further argued that what variationists have called inherent variability can be represented as a struggle between faithfulness constraints, e.g., that consonant /l/ wants to remain a consonant, and markedness constraints, particularly syllable harmony constraints.

The overall aim of the /l/ vocalization project is to study the usual linguistic and social patterning of this change in progress but also to take a special look at the geographic patterns of variability. It is particularly important to examine the geographical spread of language change if only to present counterexamples to the widespread belief in Australian English studies that there is no or at best minimal geographical variation throughout the country. Our aim, however, is larger than that; we want to demonstrate that the study of the geolinguistics of sound change will yield interesting insights into the role that patterns of geography play in the spread of language change. To accomplish this task, the /l/ vocalization study has been extended in a number of ways: as a result of lessons learned from the pilot study, we have redesigned the data collection instrument to include /l/ in many more phonological environments and have collected data in many more places. We now have data from five new cities in Australia. The cities we have studied are: Brisbane, Sydney, Melbourne, Hobart and Mount Gambier; the map shows the location of these five cities and the size of the circles represents the relative size of the population. Table 1 shows the structure of the sample and the number of

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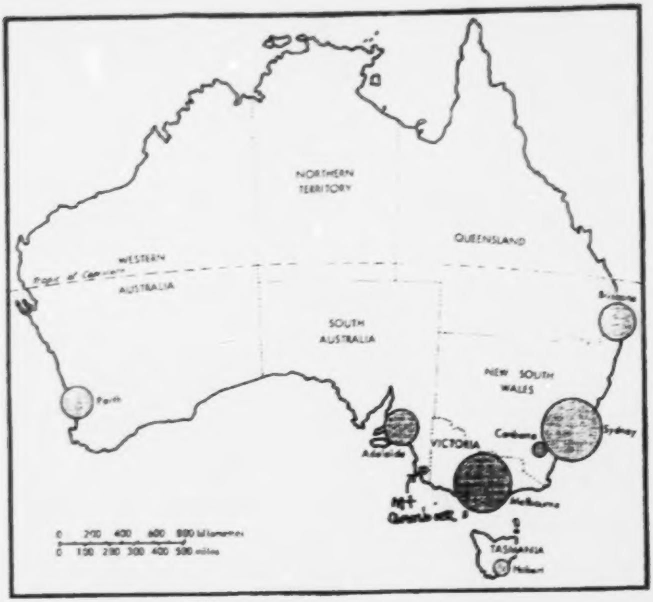
speakers collected so far. The data consists of approximately 79 words for each speaker; the data have been coded—using the Language Coder—but we have only begun the variable rule analysis of the data and will be reporting on those results in the future.


NORTHERN TERRITORY
QUEENSLAND
WESTERN AUSTRALIA
Tropic of Capricorn
SOUTH AUSTRALIA
NEW SOUTH WALES
Brisbane
Perth
Adelaide
VICTORIA
Canberra
Sydney
Melbourne
Mt Gambier
TASMANIA
Hobart
0 200 400 600 800 kilometres
0 100 200 300 400 500 miles

Number of speakers by speech locality:

| | |
|---|---|
| Mount Gambier (G) | 46 |
| Hobart (H) | 27 |
| Sydney (S) | 28 |
| Melbourne (M) | 39 |
| Brisbane (B) | 31 |
| Total | 171 |

(Approx. 79 tokens per speaker (79x171=13509); 175 tokens excluded for variety of reasons, e.g., noise masking speaker, word omitted by speaker)

Table 1. Speaker Sample

| Class | Gender | G | H | S | M | B |
|---|---|---|---|---|---|---|
| | | 29 Yrs and below | | | | |
| Working | Female | 10 | 5 | 5 | 8 | 9 |
| | Male | 9 | 3 | 1 | 3 | 5 |
| Middle | Female | 5 | 6 | 2 | 5 | 5 |
| | Male | 5 | 2 | 5 | 4 | 3 |
| TOTAL | | 29 | 16 | 13 | 20 | 22 |
| Class | Gender | G | H | S | M | B |
| | | 30 Yrs and over | | | | |
| Working | Female | 2 | 5 | 3 | 3 | 4 |
| | Male | 4 | 2 | 2 | 5 | 4 |
| Middle | Female | 4 | 1 | 5 | 4 | 1 |
| | Male | 7 | 3 | 5 | 7 | 0 |
| TOTAL | | 17 | 11 | 15 | 19 | 9 |

In this paper we will would like to concentrate on the geographical aspects of the variability that we have observed. We call the approach 'geolinguistics' after the suggestion made by Chambers and Trudgill (198 ). We begin by briefly contrasting our approach with the early work in dialect geography by researchers like Orton in England and Kurath in New England. Dialect geography primarily used maps to display relatively unanalyzed data and hoped that regional dialects would emerge from the maps: i.e., that either a single isogloss or bundles of isoglosses would emerge that would suggest where some dialect boundary could be located. Explanation for the patterns would then be found in terms of something like settlement history. This approach conforms with the practices of regional geography of the same era - the 1930's, '40s and '50s. With the advent of sociolinguistics in the '60's came a variety of criticisms of dialect geography, including sampling and data collection methods as well as methods of linguistic analysis. Since that time, sociolinguists following in Labov's footsteps have focussed on single speech localities and have all but abandoned geographical variation in their determination to discover the social and linguistic patterns of variation in a single speech community. Geolinguistics seems to have been developed outside of sociolinguistics with the work of the geographer Colin Williams. In this paper we will argue for the return of geography to dialect studies with the proviso that the reinstatement needs to

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take account of developments in both sociolinguistics and geography.

## 2. Geographical Patterns of /l/ Vocalization

Table 2 shows the number of tokens (words containing /l/) in the dataset; there are a total of 13,334 tokens in the dataset from all five cities with an overall rate of vocalization of just over 20%. However, as the 'Percent vocalized /l/' row shows, the five cities can be depicted as an implicational array, with Mount Gambier (in South Australia, where our pilot study was conducted) having the highest percentage of vocalizations followed in turn by Hobart, Sydney, Melbourne and Brisbane with the least amount of vocalization.

Table 2. Overall Statistics

| | G | H | S | M | B | Total |
|---|---|---|---|---|---|---|
| number of tokens | 3592 | 2127 | 2109 | 3073 | 2433 | 13,334 |
| number of vocalized /l/ | 1197 | 545 | 495 | 366 | 181 | 2784 |
| percent vocalized /l/ | 33.32 | 25.62 | 23.47 | 11.91 | 7.44 | 20.88 |

The linguistic coding of the dataset is given in Table 3(a); in the column labelled 'Linguistic Factors' there are some factors that were coded but whch have been left out here, e.g., whether or not the preceding or following consonants were voiced or voiceless, but in general these are the factors that we assume play some role in explaining the linguistic variability. Of course, we assume that the results of the Goldvarb analysis will be that only some of these factors end up accounting for the variation. In this preliminary report and for the purposes of looking at the geographical structure of the variation, we can see whether the implicational analysis can be maintained.

In an early paper on implicational analysis, Fasold (1973) made the distinction between 2-valued (presence/absence of a feature), 3-valued (presence/variable/absence of a feature) and n-ary implicational tables where a numerical value represents the frequency of a variable. The latter are more exacting because they require that the numerical values, in this case percentages, maintain

Table 3(a): Linguistic Factors x Speech locality

| Linguistic Factors | Ex. | G | H | S | M | B |
|---|---|---|---|---|---|---|
| | | Percentage Vocalized /l/ | | | | |
| /l/+dorsal | milk | 78 | 48 | 51 | 33 | 33 |
| dorsal+syll /l/ | pickle | 56 | 20 | **30** | 24 | 4 |
| high/back V+/l/ | cool | 54 | 52 | 33 | 28 | 16 |
| diphthong+/l/ | boil | 48 | 29 | 29 | 17 | 19 |
| high V+/l/ | field | 46 | 43 | 32 | 21 | 13 |
| /l/##C | feel sorry | 43 | 35 | 30 | 18 | 6 |
| /l/ is clustered | hulk | 41 | 35 | 28 | 15 | 9 |
| long V+/l/ | hall | 37 | 35 | 28 | 17 | 7 |
| /l/##pause | foal | 35 | 26 | 23 | 11 | 9 |
| central V+/l/ | girl | 34 | 32 | 19 | 8 | 5 |
| front V+/l/ | feel | 34 | 31 | 26 | 12 | 8 |
| back V+/l/ | cool | 33 | 20 | **27** | 14 | 11 |
| coronal+syll /l/ | bottle | 31 | 11 | 14 | 9 | 3 |
| /l/ is syllabic | horribl | 29 | 10 | **16** | 10 | 3 |
| short V+/l/ | fill | 28 | 30 | 26 | 9 | 10 |
| mid V+/l/ | sell | 26 | 20 | 21 | 7 | 6 |
| low V+/l/ | Mal | 22 | **29** | 19 | 4 | 3 |
| /l/ is coda | small | 19 | 19 | 21 | 6 | 9 |
| /l/##V | bottle of | 19 | 8 | 12 | 6 | 1 |
| /l/+labial | help | 15 | **41** | 28 | 4 | **21** |
| low/front V+/l/ | Nile | 14 | **21** | 13 | 2 | 1 |
| labial+syll /l/ | people | 12 | 3 | **10** | 3 | 2 |
| /l/+coronal | felt | 11 | 10 | 15 | 2 | 3 |

Reproducibility measure: 1 - number of errors/number of cells (Miller 1991:178)

Measured across only and with ±5% tolerance: 1- 8/115 = .93

Table 3(b) Linguistic Factors x Speech Locality
(Total number of vocalizations/total number of tokens)

| Linguistic Factors | Mt. Gambier | Hobart | Sydney | Melbourne | Brisbane |
|---|---|---|---|---|---|
| /l/+dorsal | 71/91 | 26/54 | 28/55 | 26/79 | 20/61 |
| dorsal+syll /l/ | 102/183 | 22/111 | 31/105 | 38/160 | 5/121 |
| high/back V+/l/ | 196/366 | 111/215 | 73/218 | 87/310 | 41/251 |
| diphthong+/l/ | 149/313 | 51/178 | 53/181 | 43/256 | 39/207 |
| high V+/l/ | 497/1076 | 274/634 | 202/629 | 187/911 | 96/728 |
| /l/##C | 507/1177 | 246/707 | 208/664 | 179/1003 | 51/805 |
| /l/ is clustered | 803/1942 | 402/1149 | 315/1138 | 254/1648 | 116/1313 |
| long V+/l/ | 311/851 | 179/511 | 139/499 | 126/731 | 39/583 |
| /l/##pause | 157/452 | 67/261 | 62/264 | 43/385 | 27/300 |
| central V+/l/ | 201/596 | 72/356 | 64/354 | 43/516 | 22/403 |
| front V+/l/ | 438/1307 | 31/771 | 196/761 | 135/1110 | 74/881 |

Table 3(b) continued

| Linguistic Factors | Mt. Gambier | Hobart | Sydney | Melbourne | Brisbane |
|---|---|---|---|---|---|
| back V+/l/ | 327/1002 | 187/593 | 163/595 | 118/853 | 72/682 |
| coronal+syll /l/ | 99/321 | 21/192 | 26/191 | 25/276 | 6/221 |
| /l/ is syllabic | 239/824 | 49/490 . | 75/480 | 71/713 | 15/561 |
| short V+/l/ | 286/1007 | 179/598 | 157/598 | 82/864 | 67/680 |
| mid V+/l/ | 429/1645 | 193/981 | 204/975 | 103/1416 | 68/1114 |
| low V+/l/ | 40/184 | 30/105 | 20/106 | 6/152 | 4/124 |
| /l/ is coda | 155/826 | 94/488 | 105/491 | 41/712 | 50/559 |
| /l/##V | 113/589 | 26/345 | 39/339 | 32/504 | 4/394 |
| /l/+labial | 21/137 | 33/81 | 23/82 | 5/119 | 18/86 |
| low/front V+/l/ | 19/138 | 16/77 | 10/78 | 2/112 | 1/93 |
| labial+syll /l/ | 38/320 | 6/187 | 18/184 | 8/277 | 4/219 |
| /l/+coronal | 63/598 | 35/353 | 54/354 | 10/514 | 12/412 |

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an implicational ordering. Table 3(a) is an n-ary implicational table. The cells that do not fit the implicational pattern are underlined and even with the as yet unanalyzed list of linguistic factors, the reproducibility measure is a respectable .93, given 5% tolerance. This means that not only are the five cities ordered implicationally for the overall rate of vocalization but that that alignment is maintained even when we unpack the conditioning factors on /l/ vocalization to a quite delicate scale. Table 3(b) gives the number of tokens that the percentage figures represent.

Table 4 shows that the social factors also form an implicational array—with a reproducibility of .93. Once again, it is unlikely that all of these factors will be selected by Goldvarb as significant in accounting for the variability of /l/ vocalization, but it is nevertheless the case that the implications stand—speakers from Mount Gambier vocalize more than do speakers from Hobart, Sydney and so forth, no matter what the social category is—age, social class or gender.

Table 4. Social Factors x Speech Locality

| Social Factors | G | H | S | M | B |
|---|---|---|---|---|---|
| | Percentage of Vocalizations | | | | |
| 29 or below | 37 | 31 | 26 | 15 | 9 |
| female | 36 | 27 | 28 | 14 | 9 |
| working class | 35 | 25 | **31** | 11 | 8 |
| 30 or over | 29 | 21 | 14 | 11 | 7 |
| male | 31 | 24 | 18 | 10 | 5 |
| middle class | 27 | 22 | **34** | 9 | 2 |

Reproducibility (5% tolerance): 1 - 2/30 = .93

Table 5 is an implicational table in which we extract a theoretically coherent dimension from the linguistic factors on Table 3(a). Sproat & Fujimura (1993) have shown in an articulatory study that English laterals are complex segments containing two gestures, a coronal and a dorsal one. Table 5 would indicate that some kind of place assimilation might account for the variability; /l/s are vocalized more often when in the context of back sounds (dorsal consonants and back vowels) than they are in the context of front sounds (coronal consonants and front vowels).

Table 5. Backness-Frontness Dimension x Speech Locality

| Linguistic Dimension | Linguistic Factors | G | H | S | M | B |
|---|---|---|---|---|---|---|
| | | Percentage of Vocalization | | | | |
| BACK | /l/+dorsal | 78 | 48 | 51 | 33 | 33 |
| | high/back V+/l/ | 54 | 52 | 33 | 28 | 16 |
| | dorsal+syll /l/ | 56 | 20 | 30 | 24 | 4 |
| | coronal+syll /l/ | 31 | 11 | 14 | 9 | 3 |
| | low/front V+/l/ | 14 | 21 | 13 | 2 | 1 |
| FRONT | /l/+coronal | 11 | 10 | 15 | 2 | 3 |

Reproducibility (5% tolerance): 1 - 3/30 = .90

Table 6. Following Environment (Word final /l/) x Speech Locality

| /l/##X | G | H | S | M | B |
|---|---|---|---|---|---|
| | Percentage of Vocalizations | | | | |
| Consonant | 43 | [illegible] | 30 | 18 | 6 |
| Pause | 35 | [illegible] | 23 | 11 | 9 |
| Vowel | 19 | 8 | 12 | 6 | 1 |

Reproducibility (±5% tolerance): 1

Table 6 shows another linguistically coherent subset of the linguistic factors; /l/s vocalize everywhere more when followed by a consonant than when followed by a pause and least of all when followed by a vowel. Table 7 shows that vocalization occurs most often in every speech locality (with one exception) when /l/ is clustered (as in *milk*), followed by when it is syllabic (as in *people*) and least when it is a coda (as in *feel*). These facts differ from our earlier report on Adelaide where /l/ was categorically a consonant when followed by a vowel and syllabic /l/s were most frequently vocalized. A Goldvarb study just recently completed in Southend, Colchester and Norwich in England by Miriam Spero (1996) using the same data collection instrument found the following order: clustered (with a probability of .776), coda (.661) and syllabic (.554); this factor group is clearly going to prove interesting in any account of cross-dialectal comparison. Finally, Table 8 shows that the age factor holds in all speech localities, a good indicator that vocalization is a sound change in progress in all speech localities.

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Table 7. Type of /l/: Clustered, Syllabic or Coda x Speech Locality

| Type of /l/ | G | H | S | M | B |
|---|---|---|---|---|---|
| | Percentage of Vocalizations | | | | |
| Clustered | 41 | 35 | 28 | 15 | 9 |
| Syllabic | 29 | 10 | 16 | 10 | 3 |
| Coda | 19 | 19 | 21 | 6 | 9 |

Reproducibility (±5% tolerance): 1-1/15 = .93

Table 8. Age x Speech Locality

| Age | G | H | S | M | B |
|---|---|---|---|---|---|
| | Percentage of Vocalizations | | | | |
| 29 and below | 37 | 31 | 26 | 15 | 9 |
| 30 and over | 29 | 21 | 14 | 11 | 7 |

Reproducibility: 1

We have at least gained something from adding geography to sociolinguistics and that is another kind of evidence of language change in progress. But this addition is not the only or even the most important contribution we can expect of geolinguistics. Chambers and Trudgill correctly reject Bailey's statement that "Geographical dispersions can be so chaotic as to challenge the plausibility of any hypotheses about the orderliness of language." and they predict "...a fruitful interchange of hypotheses with geography," particularly concerning geographic models of diffusion (1980: 205). Colin Williams chides work in sociolinguistics for treating "...the spatial dimension of language contact and change… as either 'given' or assumed to be merely a context, a backdrop for more detailed inter-personal behavioural studies." He goes on to say: "As a reaction to this particular conceptualisation of space, a number of geographers have sought to analyze language (...) from an explicit spatial perspective." and "The most fundamental task of geolinguistics (is) the analysis of distribution patterns and spatial structure of languages …" (1984:9). Let us now look at our results and examine how the geographical structure of the variability of the vocalization of /l/ in Australian English further contributes to our understanding of how language changes.

## 3. A Geographical Interpretation

In this section we discuss three of the most common models used by geographers to understand change. The first, the hierarchical model, traces changes from larger to smaller cities within an urban system. The second, the cultural hearth model, focuses upon the speech locality in which an innovation first appears and from which it spreads more widely. The third model, the core-periphery model, focuses upon changes spreading from the rapidly growing periphery to the more slowly growing older core. The question posed here is which of the three models best accounts for the patterns of the geographical variability of /l/.

Figure 1 is a highly stylised representation of the hierarchical model given the Australian urban system. For our purposes, we can think of the urban system as consisting of three levels:

1. Two primate cities (Sydney and Melbourne with populations of over three million people)
2. Four capital cities with populations between 250,000 and just over 1,000,000 people (Brisbane, Adelaide, Hobart, Perth and Canberra)
3. Many country towns that are not capital cities and have smaller populations than the higher order cities. Mt. Gambier is the only country town reported on here.

If /l/ vocalisation were spreading down the urban hierarchy from Sydney, Australia's only global city, and Melbourne to the second order capital cities and then to country towns, we would expect to see the following pattern on the implicational scale: 1. Sydney, 2. Melbourne, 3. Brisbane, 4. Adelaide, 5. Hobart, and 6. Mt. Gambier. Clearly, as the numbers on the figure show, the data do not follow the model involving change down the urban hierarchy. The hierarchical change model is not here as a strawman. The majority of the studies of change/spread of innovation have reported that important changes do move down the urban hierarchy and it is commonly believed in Australia that Sydney or Sydney and Melbourne together are the speech localities where changes begin.

Figure 2 presents the same implicational ordering discussed above using the stylised representation of the Australian urban system. The frequency of /l/ vocalization is highest in Mt. Gambier and Adelaide. The graphically represented implicational order is as follows: (Adelaide—using evidence from the pilot study) Mt. Gambier, Hobart, Sydney, Melbourne, and last Brisbane. The implicational pattern appears similar to the cultural hearth model where a change begins in a specific speech locality or region (South Australia in this case) and spreads to other speech localities.

Figure 3 divides Australia into a rapidly growing periphery that includes Brisbane and Perth (Australia's Sun Belt) and the slowly growing older core (Southeastern Australia). Clearly, /l/ vocalisation is not spreading from the periphery to the core; in fact, the change is spreading from the most slowly growing parts of the older core, South Australia and Tasmania.

These results, would not meet the expectations of most Australians who would not imagine that innovations begin in South Australia and spread to the rest of Australia. As we have noted, most studies in fact do show that in general innovations in Australia move down the urban hierarchy rather that up from below. We now turn to a discussion of geolinguistics and its potential for adding to our ability to account for language change over time and space.

## 4. Conclusions

There are several conclusions that we can draw from the project as it has developed so far. There has been a tendency in Australian English studies to regard the Sydney dialect as the model for all of Australian English; the hierarchy of cities model is generally accepted by scholars and ordinary Australians alike. We have shown that Sydney is not the lead dialect for this sound change and one cannot just study the primate cities and know about the variability of Australian English. In fact there is a distinct advantage to studying the same sound change in a number of different speech localities: as we see the change beginning again and again and progressing through the linguistic system again and again, we can begin to innovations investigate innovations hypotheses about whether and to what degree the linguistic path of change is controlled by markedness considerations and whether and to what degree other contextual variables like social and geographical characteristics constrain the path of change.

What we want to focus on in this paper, however, is the fact that there is a geographical dimension to the variability of the vocalization of /l/ in Australia. In addition to having sufficient evidence from our Adelaide data to claim that /l/ vocalization is a

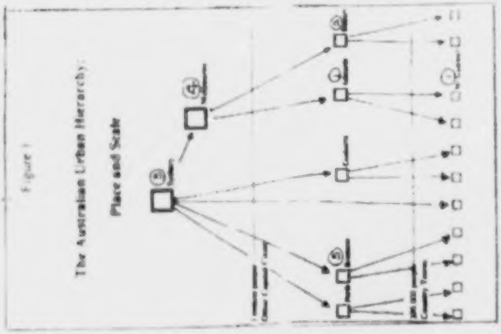

Figure 1

The Australian Urban Hierarchy:

Place and Scale

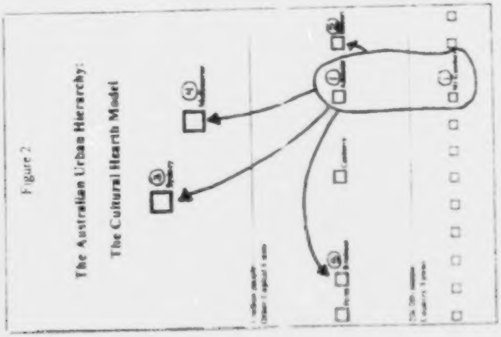

Figure 2

The Australian Urban Hierarchy:

The Cultural Hearth Model

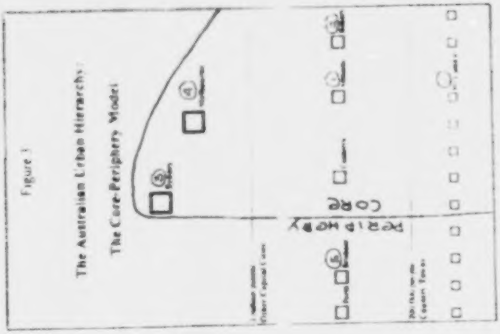

Figure 3

The Australian Urban Hierarchy:

The Core-Periphery Model

Circled numbers refer to implication order

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change from below as sociolinguists understand that concept, our geographic analysis has indicated that it is also geographically a change from below, i.e., it is not proceeding down the urban hierarchy but rather seems to have originated in South Australia appearing in both a country town and Adelaide, the capital city. This leads us to further discussion of how we think geography ought to be reinstated in dialect studies.

We have used the term geolinguistics to describe an approach to the study of linguistic variability. We will now briefly characterize geolinguistics in two ways: 1) its relationship to sociolinguistics and 2) its relationship to dialect geography.

Geolinguistics adds a modern conception of geography to the field of sociolinguistics. Our current understanding of this project is to view geolinguistics as an approach to linguistic variation that takes into acount three structures: linguistic, social, and geographic. By linguistic we mean the analysis of language variation along the lines sociolinguists have been developing since Labov's earliest work. By social structure, we mean taking into account how social structures, especially gender, social class and age, constrain variation and change. By geographical structure, we are interested in investigating how the concepts of place, space and scale contribute to an understanding of linguistic variation and change. Recognizing the equal importance of geographic structure means that 'geography matters', i.e., that place, space and scale contribute in important ways to conditioning language change.

Let us once again compare geolinguistics with dialect geography. We suggest six important differences between them (Table 9). This table shows only two positions: what was in the past and what could be but is not yet. The table suggests that maps will need to reflect the sociolinguistic analysis and the patterns of variation and that we will need to look to geographic models before we can claim that the patterns are explained. Geography matters and it is up to future work in geolinguistics to show in what ways; in further work on the vocalizatiodialect n of /l/ in widely scattered speech localities we hope to address the question in detail. The current work linking sociolinguistics and geography by such people as Trudgill, Kretchmar and his associates, Bailey, Wikel and their associates or David Britain clearly shows that geolinguistics is rapidly becoming an important dimension in studies of sociolinguistic variation.

Table 9. Dialect Geography vs Geolinguistics

| | **Dialect Geography** | **Geolinguistics** |
|---|---|---|
| 1. **SAMPLE** | A very small number of speakers, often a single speaker, chosen according to predetermined selection criteria (older, rural, etc.) | A sample of speakers from a speech locality representing its gender, social class and age structure; of a sufficient number to allow tests of statistical significance to be used |
| 2. **TYPE OF ANALYSIS** | Qualitative analysis | Quantitative and qualitative analysis |
| 3. **GEOGRAPHY** | 1930s-1950s Regional Geography framework | Geography matters, i.e., place, space, and scale become possible constraints on linguistic variation |
| 4. **MAPPING** | Direct mapping of language features | Mapping of sociolinguistically analyzed features |
| 5. **RESEARCH OBJECTIVES** | Use isoglosses for identifying dialects | Characterize the geographical dimension of language change in progress |
| 6. **INDIVIDUAL VS ECOLOGICAL FALLACY** | Vulnerable to the individual fallacy | Both individuals and groups can be analysed and mapped |

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# Urban Sound Change Beyond the Cities: The Spread of the Northern Cities Chain Shift

Matthew J. Gordon

## 1. Introduction

The complex rearrangement of vowels known as the Northern Cities Chain Shift, or simply the Northern Cities Shift (NCS), surely ranks among the most intriguing phonological discoveries of modern sociolinguistics. The shift is remarkable for its broad influence across both geographical and phonological space. As for the former, evidence of the shift has been documented as far east as New England and as far west as the Mississippi River, though most research has been focussed on a few large cities including Chicago, Detroit, Buffalo and Rochester. In terms of phonological space, the impact is also great, with recent reports claiming that as many as six vowels are affected. These vowels and the changes they are reportedly undergoing are shown in Figure 1 which provides a fairly standard representation of the shift.

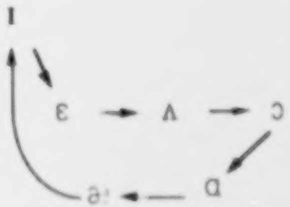

Fig. 1: The Northern Cities Shift (after Labov 1994)

The relationship of the vowels affected by the NCS and the directions in which they appear to be changing have suggested to researchers that the changes are coordinated and are operating as part of a chain shift. The chain shift model is one adopted from historical linguistics and describes a situation in which movement of one vowel triggers movement in another, which in turn may trigger others in a sort of chain reaction. The apparent relatedness of the individual elements in the shift is made quite evident by their portrayal in diagrams like Figure 1. When the changes are represented in this way, it appears that the basic movement of the NCS is a clockwise rotation with the vowels linked into a complete circuit. It is important to keep in mind, however, that the neat pattern presented in Figure 1 provides a very simplified and abstracted picture of what are in actuality rather complex and murky phonetic details.

The present paper explores a little corner of this phonetic murk by considering evidence that the directions available to the shifting vowels are not limited to those mapped in Figure 1. I will concentrate here on the movement of three vowels: the high front (I), the mid front (ɛ) and the mid central (ʌ). The focus is placed on these vowels, because each appears to be participating in a broader range of variation than is commonly acknowledged by researchers. The nature of this variation raises questions about the forces driving the shift, specifically about whether chain shifting is an appropriate model to describe the NCS changes, and the paper concludes by briefly addressing some of the implications of the current findings in these terms.

## 2. Project Description

The data presented here are taken from an on-going research project in Michigan. The goal of the project is to investigate questions related to the diffusion of the NCS, with specific focus on how the shift spreads beyond urban centers into smaller communities. Standard accounts of the shift, like Labov, Yaeger and Steiner (1972) and Labov (1994), were developed by examining the speech of large urban populations and very little attention has been given to the status of the NCS in the communities that lie between the cities. The TELSUR project that is currently underway at the University of Pennsylvania promises to help fill some of these gaps by providing a more detailed map of the geographic distribution of the NCS and other vowel patterns.

The present project also seeks to provide information on the status of the NCS outside the major cities and does so by sampling speakers from two small towns of approximately 3,500 residents each. The towns were selected because they find themselves in a sociolinguistically interesting position. While they are traditional small towns in many respects (and this aspect of their identity is often emphasized by community members), they are both located roughly 20 miles from a mid-sized city and the residents of the towns travel frequently to these cities for shopping, entertainment, and in some cases business. Both towns have easy access to Interstate 94, the main route linking Chicago and Detroit, though one is located in western Michigan (approximately 120 miles from Chicago) and one in eastern Michigan (approximately 60 miles from Detroit).

In each location sixteen speakers are sampled with equal numbers of men and women in each of two age groups (16-20 yrs. and 40-55 yrs.). The primary speech data were collected through relatively informal interviews, though this unscripted speech was supplemented by the reading of a rather lengthy word list (containing 242 items). The data discussed here are taken from the interview-style speech of nine speakers from the west Michigan town being investigated. Tokens of the vowels were coded on the basis of auditory judgments, though fans of formant frequency measures can rest assured that my future research plans include some instrumental analysis of the vowels.

## 3. Vowels with Variable Trajectories

### 3.1. The (ɛ) Variable

Turning to the question at hand which is whether the directions indicated in Figure 1 are the only ones taken by shifting vowels, I would like to begin by examining the evidence related to the mid front (ɛ).

Of the three vowels being considered here, (ɛ) is the only one for which different routes have been discussed in the literature. Thus, while Labov (1994) now seems to hold the backing tendency to be primary for this vowel, in their original formulation of the NCS, Labov, Yaeger and Steiner (1972) described the movement of (ɛ) as one of lowering to something near a low front [æ]. Labov (1994:196) suggests that this discrepancy represents a diachronic development in the shift where the initial lowering tendency is being replaced by a backing rule. Eckert (1991), on the other hand, suggests that the difference of lowering versus backing is characteristic of a synchronic Chicago versus Detroit distinction. Unfortunately, sufficient evidence has not been offered to support either of these claims, and in fact to some extent the data seem to contradict both accounts, as it appears that both variants are still available in both locations.

In the present study the overwhelming majority of shifting in (ɛ) items involves backing, though the lowering tendency has also been observed with respectable frequency. In addition, several tokens of (ɛ) were found to be both lowered and backed, an apparent compromise tendency that has also been reported by both Labov (1994:192) and Eckert (1991). Data on the relative frequencies of the three shifted variants of (ɛ) are presented in Table 1.

**Table 1: Frequency of shifted (ɛ) variants (total n=946).**

| | [ɛ˃] | [ɛ˅] | [ɛ˅˃] | Total |
|---|---|---|---|---|
| **number:** | 222 | 46 | 17 | 285 |
| **% of all (ɛ):** | 23.5 % | 4.9 % | 1.8 % | 30.1 % |
| **% of shifted:** | 77.9 % | 16.1 % | 6.0 % | |

This table gives the frequency information for each variant as a percentage of the total number of (ɛ) tokens examined across 9 speakers, which was 946. So for example, we see that out of the 946 tokens, I found 222 that were backed, and this represents 23.5% of the total. The last column in the table indicates the overall rate of shifting for this variable (i.e the number of (ɛ) items that were shifted in any direction), and here we see that this vowel was shifted just over 30% of the time. The frequency of each of the three shifted variants is also expressed as a percentage of the total number of innovative tokens (285), and these figures are found in the bottom row (e.g. the 222 cases of backing represent 77.9% of the shifted tokens). So, Table 1 indicates that backing is the preferred direction of shifting for this vowel; however, it also shows that alternative trajectories are possible and merit further consideration.

As a first crack at such further consideration I would like to explore the possiblity that the variant trajectories are conditioned phonologically. Toward this end I have compiled lists of the lexical items in which shifted variants appeared. These lists appear as Tables 2(a-c). The words are broken down into 6 groups based on the type of consonant that follows the shifted vowel. As indicated by the headings, the categories of consonants are voiceless and voiced stops, voiceless and voiced fricatives, the lateral /l/ and nasals.

**Table 2(a): Distribution of backed variants of (ɛ)**

Voiceless Stops (n=13)
athletic
election (2)
let (2)
neglect
pep
preterite
separate
sweater (2)
threatened
yet

Voiced Stops (n=13)
already
credit (2)
ed
instead
pregnant
red (2)
said (4)
says

Voiceless Fricatives (n=20)
definitely (2)
Ethel
freshman (2)
left (3)
less (2)
questions
semester (3)
test (2)
west (3)
wrestling

Voiced Fricatives (n=25)
ever
every (3)
everyone (2)
everything (4)
everywhere
never (6)
seventeen (3)
seventy
several
weather (2)
whatever

Lateral /l/ (n=58)
celebrate
development
else (2)
felt
help (8)
itself (2)
smell
tell
well (41)

Nasals (n=93)
central
December
dependent
depends
elementary (2)
expense
French (2)
friend (9)
Friendville
generally
lent
November
pens
percent (2)
percentage
sense
sentence (2)
spent
tendency
them (2)
then (7)
trend
twentieth
twenty (11)
Wendy's
went (30)
when (9)

The categorization in these tables is obviously rough but still seems to provide some indication of a pattern. Thus it appears that backed variants occur most frequently before nasals and /l/ (for example we often hear schwa-like pronunciations in *friend*, *percent*, and *November* as well as *smell*, *help*, and *else*). The pre-nasal environment is clearly the most favorable one for backing, with 93 tokens occurring in a wide variety of lexical items. Phonetically, backing might be predicted in this environment on accoustic grounds since the spectral profile of the vowel can be influenced by the addition of a nasal formant which may lead to the perception of increased centralization. As for the backing before /l/, the high frequency of this tendency seems to be due primarily to its common occurrence in a single item, *well*, which appeared with a backed vowel 41 times. This raises the possiblity that this item is a lexical exception and is not really indicative of a phonological trend. While this may be the case, I should also note that, in general, backing of /ɛ/ is quite common before /l/ and has been reported for other dialects of English (e.g. Norwich as described by Trudgill (1974)). In this phonological environment backing might be explained in articulatory terms as assimilative, with the vowel approaching the back position of the velarized /l/.

**Table 2(b): Distribution of lowered variants of (ɛ )**

Voiceless Stops (n=14)
better connected kept met
Mexican Mexico (4) second (2) Texas (2)
textbooks

Voiced Stops (n=4)
ahead ed red tread

Voiceless Fricatives (n=8)
definitely lessons nephews rest
semester (2) test (2)

Voiced Fricatives (n=10)
every everybody everyday everyone (2)
everything (3) never together

Lateral /l/ (n=7)
bell fell personnel tell
twelve well (2)

Nasals (n=3)
offenses ten then

**Table 2(c): Distribution of lowered + backed variants of (ɛ)**

Voiceless Stops (n=1)
upset

Voiced Stops (n=0)

Voiceless Fricatives (n=3)
dress guess left

Voiced Fricatives (n=4)
everybody everything (3)

Lateral /l/ (n=5)
help (2) helping well (2)

Nasals (n=4)
defensive remember ten went

The distribution of the backed tokens of (ɛ) (Table 2(b)) can be contrasted with that of the lowered tokens. While this vowel is lowered occasionally before nasals and /l/, this tendency is much less common in these items than is backing. Interestingly, what was one of the least common environments for backing, namely before voiceless stops, is the most common environment for lowering and results in pronunciations of items like *Texas*, *Mexico*, and *kept* with an [æ]-like quality. The suggestion that this environment may play a role in conditioning lowering rather than backing is strengthened by a re-examination of those relatively few cases where this vowel is backed before voiceless stops, since in all but three of these items the vowel is preceded by either an /l/ an /r/ or a /w/, each of which might be expected to promote backing as an accoustically or articulatorily assimilative consequence. The distribution of the variants that were both lowered and backed is also provided in Table 2(c), though with so few tokens no clear pattern is discernable yet for these items.

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### 3.2. The (I) Variable

Turning our attention now to another vowel, the high front /I/, we find that here too there is more variation than is predicted by Figure 1. In addition to the lowering tendency indicated by that diagram, this vowel also exhibits a fondness for backing and sometimes these two directions are combined to produce a schwa-like variant. Thus, in terms of directionality, the variation for the (I) class is very similar to that seen with the (ɛ) class. This similarity extends to the relative frequencies of the variants as shown in Table 3, the format of which is the same as for Table 1.

**Table 3: Frequency of shifted (I) variants (total n=1,108).**

| | [I˃] | [I˅] | [I˃˅] | Total |
|---|---|---|---|---|
| **number:** | 52 | 14 | 33 | 99 |
| **% of all (I):** | 4.7 % | 1.3 % | 3.0 % | 8.9 % |
| **% of shifted:** | 52.5 % | 14.1 % | 33.3 % | |

The first thing to note about the shifting of (I) is that it is relatively uncommon as compared with the shifting for (ɛ). As you can see, only 99 tokens out of the 1,108 coded were shifted, which gives an overall shifting rate of just under 9%, considerably lower that the 30% rate at which the (ɛ) variable appears shifted. Despite their relative infrequency, the innovative variants of the (I) class are distributed in a pattern quite similar to that seen for (ɛ) . Thus, as it did with the (ɛ) variable, the backing tendency predominates with (I) accounting for over half (52.5%) of all shifted tokens. Unlike with (ɛ) however, the next most common (I) variant was the one that is both lowered and backed, which was shown by one third of the shifted tokens. Straight lowering was pretty rare appearing in just 14 cases, a finding that is somewhat surprising given that this is supposed to be the principal direction of change according to standard accounts of the NCS.

### Table 4(a): Distribution of backed variants of (I)

Voiceless Stops (n=24)

| | | | |
|---|---|---|---|
| bit | it | little (17) | pity |
| six (2) | stitches | trip | |

Voiced Stops (n=8)

| | | | |
|---|---|---|---|
| big | did (2) | didn't | kids |
| Madrid (2) | middle | | |

Voiceless Fricatives (n=7)

| | | | |
|---|---|---|---|
| commission | different (2) | district | enlisted |
| if | list | | |

Voiced Fricatives (n=7)

| | | | |
|---|---|---|---|
| deliver | his | live (2) | lived |
| living (2) | | | |

Lateral /l/ (n=4)

| | | | |
|---|---|---|---|
| built | children | will | willed |

Nasals (n=2)

| | |
|---|---|
| since | finished |

### Table 4(b): Distribution of lowered variants of (I)

Voiceless Stops (n=7)

| | | | |
|---|---|---|---|
| admit | committee (3) | fit | pretty |
| strict | | | |

Voiced Stops (n=2)

| | |
|---|---|
| did | kids |

Voiceless Fricatives (n=1)

fifth

Voiced Fricatives (n=0)

Lateral /l/ (n=1)

will

Nasals (n=3)

| | | |
|---|---|---|
| fringe | in | Virginia |

**Table 4(c): Distribution of lowered + backed variants of (I)**

Voiceless Stops (n=6)
chicken clippings equip grips
little strict

Voiced Stops (n=13)
did (4) figure kids (7) sibling

Voiceless Fricatives (n=3)
Christmas difference with

Voiced Fricatives (n=1)
business

Lateral /l/ (n=6)
build children (4) village

Nasals (n=4)
dinner gym in since

When we look at the lexical distribution of the (I) variants, which is presented in Tables 4(a-c), we find the situation is quite messy and no obvious pattern of phonological conditioning has emerged. Backing of this vowel was found to be most common before voiceless stops, though this result may be skewed by the frequency of the single item, *little*, which accounted for 17 of the 24 tokens. For this item as well as others like *live*, *list*, *trip*, and *Madrid*, the backing may be due to the liquid consonant that precedes the vowel rather than the environment following the vowel.

As for the lowering in the (I) class (Table 4(b)), there are too few tokens to establish any real pattern, though I might note the possible influence of nasals on this tendency. In addition to the three cases of lowered (I) that preceded a nasal (viz. *fringe*, *in* and *Virginia*) we see that 4 of the 7 pre-voiceless stop tokens had nasals preceding the vowel. Once again we might look to a perceptual explanation for this finding. Accoustically lowering makes sense in nasal environments as the nasal formant interacts with F1 to create the perception of a lowered vowel. Therefore, this environment may turn out to play a conditioning role once more data are analyzed.

The distribution of the variant of (I) that is both lowered and backed (Table 4(c)) appears to be equally opaque. It was found most commonly before voiced stops as in *kids* and *sibling*, but this may have been an idiosyncrasy, as all 13 of those tokens were produced by a single speaker. The factors that seem to be conditioning the distribution of the other variants for the (I) class may also be operating here. Thus, adjacent liquids seem to promote this shifting as evidenced by the appearance of this variant in *clippings* and *strict* as well as *build* and *village*. Also, the use of this combination variant in items such as *gym*, *dinner* and *since*, raises the possibility that following nasals are influential here just as they seemed to be in the case of straight lowering.

### 3.3. The (ʌ) Variable

The final variable to be discussed is the mid central (ʌ) which according to standard descriptions undergoes backing and rounding in the NCS. This expected variant has been observed in the present study, but as with (I) and (ɛ) a lowered variant and one that is both lowered and backed have also been recorded. Frequency data on this variation is provided in Table 5.

**Table 5: Frequency of shifted (ʌ) variants (total n=1,000).**

| | [ʌ>] | [ʌ̌] | [ʌ̌>] | Total |
|---|---|---|---|---|
| **number:** | 56 | 23 | 11 | 90 |
| **% of all (ʌ):** | 5.6 % | 2.3 % | 1.1 % | 9.0 % |
| **% of shifted:** | 62.2 % | 25.6 % | 12.2 % | |

As Table 5 shows shifting of this vowel is not very common, occurring in just 9% of the 1,000 tokens examined, a rate very similar to that shown by (I). Also similar to the (I) variation, as well as to that of (ɛ), is the finding that backing is the predominant direction of change, occuring in over 62% of the innovative tokens. Lowering in the (ʌ) class was roughly twice as common as the combination of lowering and backing, a ranking close to that seen for (ɛ) and unlike that of (I) where the combination variant was more common than the lowered one.

**Table 6(a): Distribution of backed variants of (ʌ)**

Voiceless Stops (n=34)
bucks but (13) buttons couple
cups cuts much (7) touch
up (8)

Voiced Stops (n=2)
club studies

Voiceless Fricatives (n=4)
must stuff us (2)

Voiced Fricatives (n=3)
governor love other

Lateral /l/ (n=1)
colors

Nasals (n=12)
bunch come (2) coming done
fun funny hundred once
run some younger

**Table 6(b): Distribution of lowered variants of (ʌ)**

Voiceless Stops (n=4)
cut indestructible up (2)

Voiced Stops (n=0)

Voiceless Fricatives (n=6)
stuff (6)

Voiced Fricatives (n=4)
brother cousins husbands mother

Lateral /l/ (n=0)

Nasals (n=9)
drunk fun (4) once one (3)

**Table 6(c): Distribution of lowered + backed variants of (ʌ)**

Voiceless Stops (n=3)
couple (2) cut

Voiced Stops (n=0)

Voiceless Fricatives (n=3)
stuff us (2)

Voiced Fricatives (n=1)
mother

Lateral /l/ (n=0)

Nasals (n=4)
funny lunches once some

As we turn to the lexical distribution of the variants of (ʌ) which is presented in Tables 6(a-c), once again our attempts to find conditioning patterns are hampered somewhat by the paucity of evidence. Still, a few observations can be made. The first concerns the distribution of the backed variant. The most frequent environment for this variant was before voiceless stops; however, it should be noted that the majority of these cases (26 of the 34) were found in just three items, *but*, *up* and *much*. We might explain the perceived backing in these words as a consequence of the lip rounding for the adjacent bilabial, an explanation that would hold for many other items on the list including *couple*, *club* and *bunch*.

Backing of this vowel was also quite frequent before nasals. This finding is interesting given that a similar propensity was observed for the (ɛ) variation. This shared tendency may strengthen the argument that these changes are related in the causal manner that the chain shift model posits. However, there seems to be a little rain looming over the chain shift parade when we consider the data on the other variants of (ʌ), since both the straight lowered and the lowered plus backed variants also occur quite commonly before nasals. This makes the connection to the (ɛ) variation seem a little less direct, because, as we recall from Tables 2(a-c), these

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tendencies were fairly uncommon when the (ɛ) vowel appeared before nasals.

## 4. Some Implications

By way of conclusion I would like to consider briefly the implications of these findings for the interpretation of the Northern Cities pattern of change. While the vowels discussed in this paper are supposed to be participating in a chain shift, the argument that the variation they display constitutes a coordinated series of changes is certainly made less compelling by the appearance of alternative trajectories like those described here. For example, Labov (1994:195) suggests that the changes affecting /I/ and /ɛ/ form a drag chain in which the high vowel was dragged down into the vacancy left by the shifting /ɛ/. If the primary direction of movement for the /I/ class is backing, however, its connection to the /ɛ/ change is much less obvious. Similarly, when described as backing changes, the movements of /ɛ/ and /ʌ/ appear to be linked in a push chain where the /ʌ/ class retreats to maintain its distance from the approaching /ɛ/ items (Labov (1994:195), but this scenario can not explain the lowering tendencies observed for these vowels.

It should also be noted that, rather than serving to preserve perceptual distinctions as most elements in a traditional chain shift are supposed to do, the lowering tendencies of /ɛ/ and /ʌ/ may actually endanger some distinctions. The lowered variants of /ɛ/ approach an area of vowel space that is occupied not only by unshifted variants of the low front /æ/ but also by fronted variants of /ɑ/. Similarly, the lowered variants of /ʌ/ may achieve an [ɑ]-like quality which places them acoustically close to both unshifted /ɑ/ items and fronted tokens of /ɔ/.

While the directional ambiguity of the NCS changes seems to weaken the chain shift argument, there is, I think, some sense in which the case for the connectedness of these elements is bolstered by these findings. It might, for example, be argued that what this evidence shows is that a pattern of variation has been generalized to three phonologically related vowels. The pattern allows for these items to undergo backing, lowering or both under certain conditions which are not yet fully understood. The parallel in the behavior of these vowels is made greater by the relative frequencies of the shifted variants, since for all three backing is more common than lowering and, except in the case of (I), straight lowering is more common than the combination of lowering and backing. Still, the finding that these changes are related in some phonological way, does not mean they are participating in a chain shift. It may instead indicate they are driven by parallelism and only incidentally come to resemble a chain when limited aspects of the whole picture are observed. Whether this suggestion will be confirmed by further research of course remains to be seen. In any event, the data discussed here signal a need to look beyond the simplified pattern of Figure 1 and consider the full range of variation available to Northern Cities speakers.

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# Dialect Contact, Focusing and Phonological Rule Complexity: the Koineisation of Fenland English

David Britain

## 1. Introduction

Research on koineisation, the linguistic processes provoked by dialect contact, has been busying sociolinguists for quite a considerable period of time. Back in 1959, Ferguson suggested that the precursor of modern Arabic was a koine resulting from contact between speakers of diverse Arabic dialects. Blanc (1968) proposed a parallel origin for Israeli Hebrew. There have been an increasing number of studies which have, for example, considered koineisation as the key process leading both to the emergence of overseas Hindi and Bhojpuri-based varieties spoken by indented labourers and their descendants in Fiji (Siegel 1987), Mauritius (Domingue 1971), South Africa (Mesthrie 1991) and Trinidad (Mohan 1971, Bhatia 1988), as well as to the development of post-colonial English varieties in North America and Australasia (Bernard 1969, Dillard 1975, Trudgill 1985, 1986).

Trudgill's (1986) book *Dialects in Contact*, an account of the role linguistic accommodation plays in new dialect formation, as well as an analysis of koine development in a number of contact scenarios around the world, has triggered more recent research on the topic, particularly on new town dialects (Kerswill 1994a, 1994b, 1996; Kerswill and Williams 1992; Simpson, forthcoming), and the dialects of newly settled reclaimed areas (Britain 1991, 1997; Scholtmeijer 1990, 1992). We now have a much fuller understanding of the likely *outcomes* of koineisation, namely simplification (the increase in grammatical regularity and decrease in formal complexity); levelling (the eradication of marked variants in the dialect mix); reallocation (the refunctionalisation of input variants); and the creation of interdialect (linguistically intermediate) forms.

We know much less, however, about the intermediate stages of the koineisation process itself. This is because, as

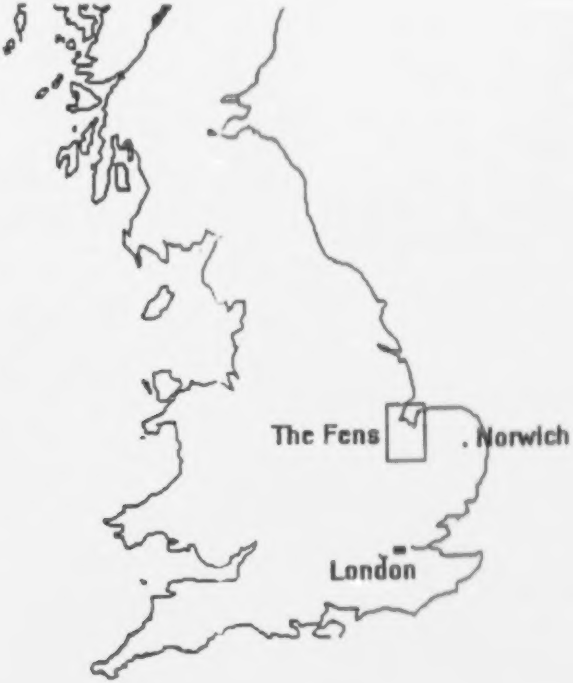
Kerswill quite rightly states (1994a:70-71), most research on dialect contact has consisted of "post-hoc observation of completed changes, for the most part three or more generations after the migration took place." He has been one of the few, in his research on the new dialect of Milton Keynes in southern England, to concentrate on the *process* of koine formation, as spoken through the mouths of young children of that city.

In this article, I look at koineisation in a dialect contact scenario which began over 300 years ago, in the Fens of eastern England. A comparison of a range of data sources, from Ellis (1889) right through to a recently collected corpus (Britain 1991), demonstrates that the koineisation process, for some variables at least, is barely complete, yet for others appears to have led to the emergence of a stable form over 200 years ago. Despite the long period of time over which koineisation has been underway, therefore, we are still able to see the crystallisation of some dialect features in progress, and hence begin to assess the constraints on new dialect development. Why, then, do some linguistic forms focus quickly, while others do so much more slowly? We will look to social, but particularly linguistic explanations in our attempt to answer this question. In the next section, I will discuss the rather special nature of the dialect contact in the Fenland speech community, as well as evidence that it is a koineised variety. In Section 3, I briefly describe the data sources used in the analysis. The following two sections present evidence of two variables, one which has been koineised for at least 200 years, another which is still focusing today. Section 6 attempts to address why there is such a time difference the emergence of the koineised forms. We finally conclude in Section 7.

## 2. Dialect Contact in the Fens

The Fens (see Figure 1) are a low-lying area of eastern England situated about 75 miles directly north of London, and 50 miles east of Norwich. Compared with the rest of Southern England it is a rather sparsely populated region, many parts of which have a population density less than a fifth of that of England as a whole. The area has a rather unique geomorphological and demographic

**Figure 1: The location of the Fens**


The Fens
. Norwich
London

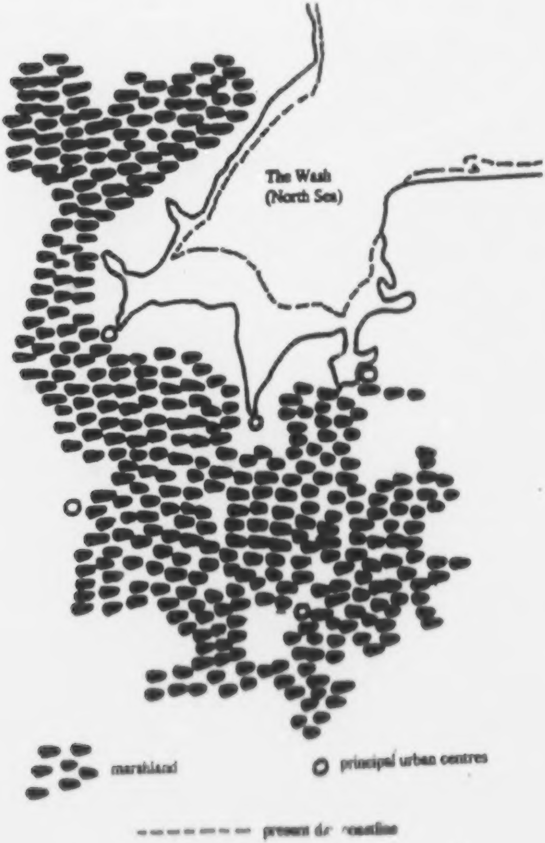

The Wash
(North Sea)
marshland
principal urban centres
present day coastline

**Figure 2: The Fenland in 1650**

history. Figure 2 shows the Fenland in the early seventeenth century. The northern coastline lay up to 12 miles further south than at present. Most of the Fenland population at that time lived on a few islands of higher ground and in small communities on this northern coastline. The southern two-thirds of the Fenland consisted of undrained marshland which was subject to tidal flooding in summer, more continuous flooding in winter and was hence too unstable for permanent settlement. The overall livelihood of many small Fenland communities was directly related to the success of efforts to hold the water back. Even the northern coastline settlements, the most stable and relatively heavily populated, witnessed major flooding in 1439, 1550, 1570, 1607 and 1613 (Darby 1974).

The mid-17th century proved to be a major turning point in the history of the Fens when Dutch engineers were commissioned to begin work on Fenland drainage. Much of the major work was completed by the late 17th century, but in some areas drainage and reclamation were not complete until the early part of this century. A previously barely passable marshland evolved into fertile arable land. The impact of the reclamation on the Fenland's demographic structure was considerable. Subsequent to drainage, the Fens saw quite rapid demographic growth, particularly in those central Fenland areas which had previously been less accessible and most susceptible to flooding. The influx came from both east (Norfolk) and west (Peterborough and Lincolnshire), though the demographic evidence suggests that relatively few came from further afield than the surrounding counties (see Britain 1997:19-20 for more detail about demographic growth and settler origins). The mixture of varieties brought into the Fens in the late 17th and 18th centuries suggests a dialect contact scenario similar to that seen much later in the polderlands of the Netherlands (Scholtmeijer 1990, 1992).

The lack of intercommunication between eastern and western sides of the Fens before reclamation is reflected in the fact that the Fens today are the site of one of the most important dialect transition zones in British English. Probably the two most often cited isoglosses are the /ʊ - ʌ/ ('cup', 'butter') and the /a - aː/ ('castle', 'last') boundaries, which run north-east to south-west

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through the Fenland (Orton & Tilling 1969). In addition, at a more local level, the area acts as an important boundary between East Anglian and Midland dialects. Following reclamation, however, the distinct eastern and western varieties spoken by the in-migrants of the 17th and 18th centuries would be subject to the processes of koineisation discussed in Section 1 above. An analysis both of the Survey of English Dialects data for this area (Orton & Tilling 1969) and of my own 81-speaker corpus of data collected in the late 1980s uncovered a number of examples, demonstrating not only that the variety spoken in the Fens straddles a major transition zone, but that it is also in many ways typical of the koineised linguistic varieties described by Trudgill (1986). Some of the transitions include:

- The presence or absence of /h/: absent to the west, present to the east.
- The realisation of /au/: [ɛː] to the west, [ɛu] to the east.
- The realisation of vowels in unstressed syllables: past tense '-ed' forms and '-ing' forms are realised with [ɪ] to the west, but [ə] to the east.

As far as koineisation is concerned, we can observe, firstly, the *levelling* of marked features from the immigrant varieties. Absent from the central Fenland variety, but typical of dialects to the east are:

- The preservation of a 'nose' [nʊuz] / 'knows' [nʌuz] distinction.
- The presence of 'do' conjunctions, as in 'don't stroke the cat do he'll bite you', where, as Trudgill (1995) explains, the conjunction derives from the grammaticisation of a shortened form of 'because if you do'.
- The absence of third person present tense *–s* (Trudgill 1974: 96).

Present in northern and western varieties, but not usual in the central Fens are:

- [ɛ] forms of /ei/ in words such as 'take' and 'make'.
- The use of 'while' meaning 'until': 'don't come while four o'clock'.

In addition, we can see examples of the *reallocation* of input variants to serve new social or contextual functions (see Trudgill 1986), or in the cases described below, new lexical or allophonic positions:

- The reallocation of north-western and south-eastern forms of ME **a** in words such as 'bath' and 'plant' into lexical sets matching neither input variety. Whereas varieties to the north-west of the Fens would have a short [a] vowel in these words, and south-eastern varieties would consistently have a longer (although in this region still quite front) [aː], in the central Fens speakers use [a] in some words and [aː] in others, though it is often the case that each interdialect speaker has a different lexical set in each class.
- The central Fenland has an allophonic distribution of /ai/ similar to that found in Canada and many parts of the northern US. Centralised [əi] onsets are found before voiceless consonants and open ones [ɑi] before voiced consonants, /ə/ and morpheme boundaries. This distribution, I have claimed (Britain 1997), is the result of the reallocation of western open onsets of /ai/ and eastern central onsets to different phonological environments in the central Fenland.

Finally it has interdialect features, features which are phonetically intermediate forms of the input variants:

- It has, for example, an intermediate [ɤ] for /ʌ/: the varieties to the north and west have [ʊ], and to the east and south [ʌ].

Like many varieties subject to koineisation, Fenland English was once considered by folk linguists to be relatively standard-like, presumably since the levelling process had eradicated marked regional features present in neighbouring or immigrant dialects (cf. Read 1933, Bernard 1969, Dillard 1975, Gordon 1983, Trudgill 1986). Ellis cites the data gatherer from the central Fenland town of Wisbech, a Mr Little, who claimed that the town had 'very little dialect proper' (1889:253) and that 'the fen country generally is the home of pure speech, by which I mean, of language but little differing from the ordinary literary English' (1889:254). Similar sentiments were expressed by Miller and Skertchly (1878).

All of the above features differentiate east from west, emphasising both the role the undrained Fens played in hindering east-west communication, and the quite radical linguistic differences which existed (and still exist) to either side.[1]

For the rest of this paper, I wish to look in more detail at two of these koineised features: the reallocated [əi]–[ɑi] forms of /ai/ and the interdialectal [ɤ] form of /ʌ/. As we will see, despite the fact that both involve ongoing changes that were underway in English long before Fenland draining, all evidence suggests that the dialect contact which followed reclamation focused one new dialect form very quickly, while the other was much slower in crystallising a distinct koineised form. I firstly present the evidence which demonstrates this differential rate of focusing, and secondly ask why we should expect such a difference. In doing so, I draw parallels between variable rates of focusing of new dialects in contact situations on the one hand, with the variable acquisition of second dialects on the other (Payne 1980, Chambers 1992, Kerswill 1996).

## 3. Sources of Data

In order to assess the extent to which Fenland Raising and interdialectal [ɤ] have focused in the central Fens, we are able to draw upon a number of sources, some written, others in the form of oral recordings, some traditional dialectological, others analysed within a more modern variationist framework. They give us a picture, albeit patchy in the case of the earlier and traditional data sources, of the past 170 years of Fenland English. By comparing the development of /ai/ and /ʌ/ in these data sets we will be able to chart the progress of koineisation in this variety.

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[1] More recent changes, however, have come largely from the south, from London, including /l/ vocalisation, labio-dental approximant [ʋ] forms of /r/, and the merger of /f/ and /θ/, and non-initial /ð/ and /v/.

The earliest source we have at our disposal is Ellis (1889). This is a dialect survey of the traditional type, based on information from over 1100 locations in Great Britain. Data in the form of spontaneous transcriptions of reading passages and word lists were sent to Ellis by a combination of trained dialect enthusiasts, (such as Thomas Hallam) or interested locals. The reliability of the data is therefore open to considerable question, but in some locations (luckily including the Fenland for some variable features) Hallam was sent to check the validity of the local data collectors' work and investigate some features more thoroughly.

Secondly we have the data from the Fenland localities set out in the Basic Materials of the Survey of English Dialects [SED] (Orton and Tilling 1969), a traditional dialectological survey of 311 largely rural localities, two of which, Outwell in Norfolk and Warboys in Cambridgeshire are in the central Fenland. The SED data from these sites can be compared with localities surveyed to the east of the Fens, such as Little Downham in Cambridgeshire, and to the west, such as Crowland in Lincolnshire.

Finally we have 3 corpora of contemporary recordings. Between 1987 and 1990, I collected a corpus of recordings of 81 working class Fenlanders of two broad age groups: old (45-66) and young (16-30) (Britain 1991). Most recordings consist of 60 to 90 minutes of informal conversation with second-order network links across the Fens, from Spalding and Warboys in the west to West Winch and Soham in the east (see Figure 3). In addition to my own data, I was fortunate enough to find two corpora which I could analyse in the same way as my own recordings. The King's Lynn Corpus, housed in that town's local library, was recorded as part of a Manpower Services Commission Local History Project carried out in the mid 1980s. All of the 10 speakers were over 55 years old and most in their 70s. The Chatteris corpus in the town's museum is a collection of 11 individual recordings made over a number of

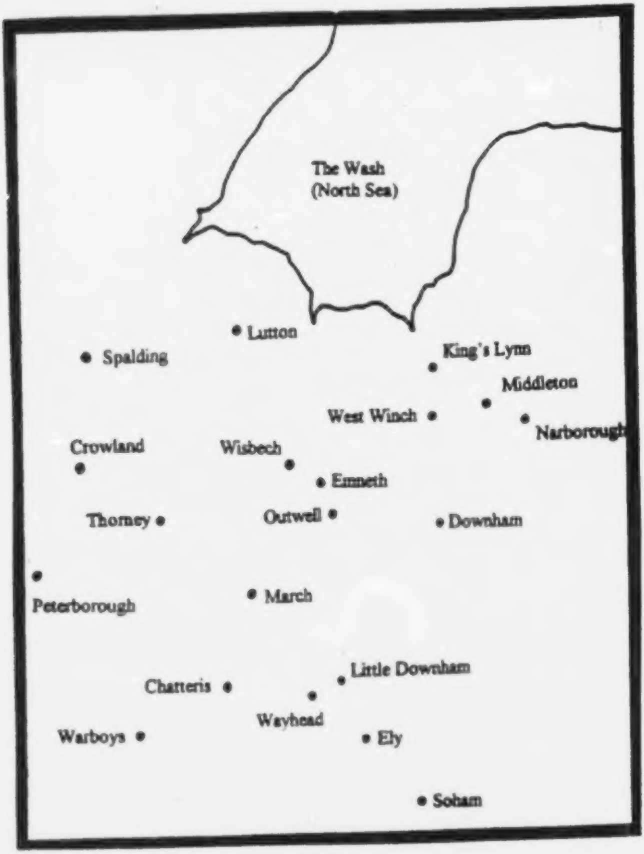
The Wash
(North Sea)
Lutton
Spalding
King's Lynn
Middleton
West Winch
Narborough
Crowland
Wisbech
Emneth
Thorney
Outwell
Downham
Peterborough
March
Little Downham
Chatteris
Wayhead
Warboys
Ely
Soham

Figure 3: Principal Fenland urban centres and other locations mentioned in the text.

years between 1974 and 1985 by the curator. Ten of these recordings are of working class residents of Chatteris. Most were at least 70 years old. The other recording was of a former Olympic ice-skater, also in his 70s from Outwell, near Wisbech (see Figure 3).

## 4. 'Fenland Raising' of /ai/

In most instances, /ai/ derives from Middle English ī. Its historical development is linked to a large-scale set of phonological changes commonly known as the Great Vowel Shift (GVS). The GVS is believed to have begun sometime in the 15th century (Wells 1982a: 184) and possibly completed in the south-east of England by around 1600 (1982a: 185), although in some parts of the UK, such as the north-east, the GVS has not completed to this day. As part of the GVS, ME ī and ū became diphthongs and subsequently the onsets of these diphthongised forms became gradually more open and central before reaching the more advanced contemporary forms (Lass 1987, Wells 1982a).

In the central Fens, speakers of all age groups consistently retain an allophonic distinction similar to Canadian Raising: centralised [əi] onsets before voiceless consonants, and open onsets, [ɑi], or even open monophthongs, [ɑː], before voiced consonants, /ə/ and morpheme boundaries. In varieties spoken to the west of the Fens we find open onsets in all environments, whereas to the east centralised onsets are found in most environments. Figures 4, 5 and 6 show the realisations of /ai/ according to following segment found in the speech of three speakers from my corpus: typical central (Emneth: see Figure 3), eastern (Wayhead) and western (Peterborough) speakers respectively.[2] Bearing in mind the demographic history of the Fens, and the phonological naturalness of such allophony, I have argued (Britain 1997) that the 'Fenland Raising' demonstrated here by the Emneth speaker, but typical throughout the central Fens, is a dialect contact phenomenon, a reallocation of western

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[2] Index scores: 0=[ɑː], 1=[ɑi], 2=[ʌi], 3=[əi], 4=[ɤi], 5=[ʊi].

**Figure 4: Onsets of /ai/ used by a speaker from Emneth in the central Fens**

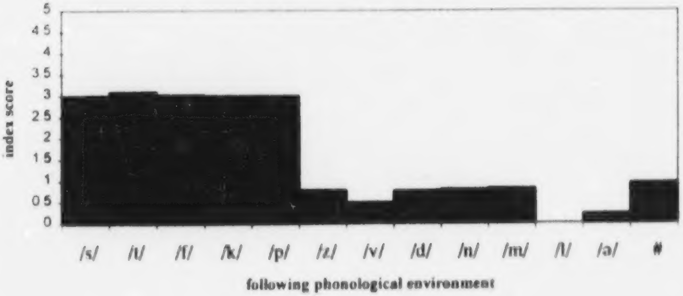
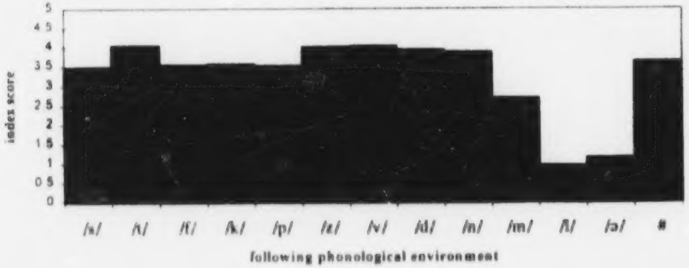


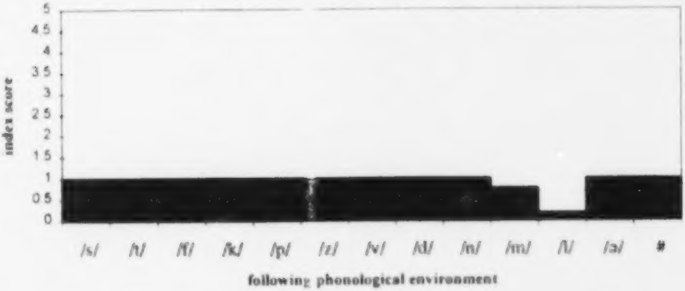
**Figure 5: onsets of /ai/ used by speaker from Wayhead in the Eastern Fens**



open onsets and eastern raised onsets to different phonological environments.

We have good evidence to suggest that 'Fenland Raising' has been present in the central Fens for almost 200 years. In Ellis (1889) there is little evidence to enable us to judge the progress of /ai/ which was not one of the sounds Ellis was particularly interested in. There is no reliable data from the central Fenland town of Wisbech, for example.

**Figure 6: onsets of /ai/ used by speaker from Peterborough in the Western Fens**



However, an allophonic split is found in the central Fenland community of Wryde near Thorney, where Hallam reports [nɔit] but [tɑim] (Ellis 1889: 254).

In the Survey of English Dialects data, the central Fenland locations of Warboys (informants born between 1883 and 1889) and Outwell (born between 1874-1889) show the allophonic distinction, with [ʌʏ - ʌi] in 'night' and 'ice', and [ɑi - ɒi] in 'time' and 'sky'. Locations to the east and west do not show such an allophonic distinction.

The Chatteris Museum data from the Chatteris men and Outwell ice-skater, born in the early years of this century, also show very clear allophony. Compare their realisations in Figure 7, with those found in the eastern Fenland King's Lynn corpus, where the use of centralised forms is not limited simply to before voiceless consonants.

My own data from the central Fens shows very little age grading, with /ai/ allophony present in the speech of young and old alike. Figure 8 shows the index scores for four speakers. Harry, the oldest, was born in 1922, Wayne, the youngest, in 1972.

The apparent time data clearly show that there has been little change in the status of Fenland Raising between the oldest and youngest generations. If anything, the distinction has become greater as monophthongal forms become more prevalent before voiced consonants, /ə/ and morpheme boundaries.

**Figure 7: onsets of /ai/ used in the King's Lynn and Chatteris corpora**

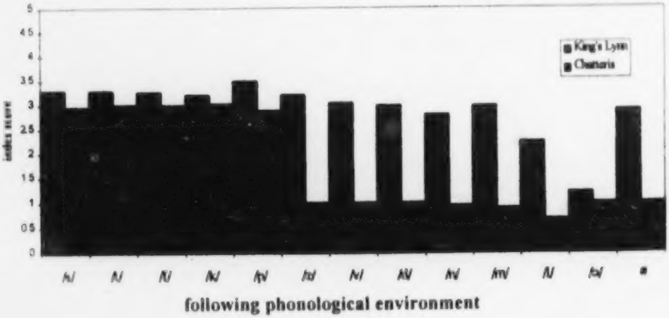
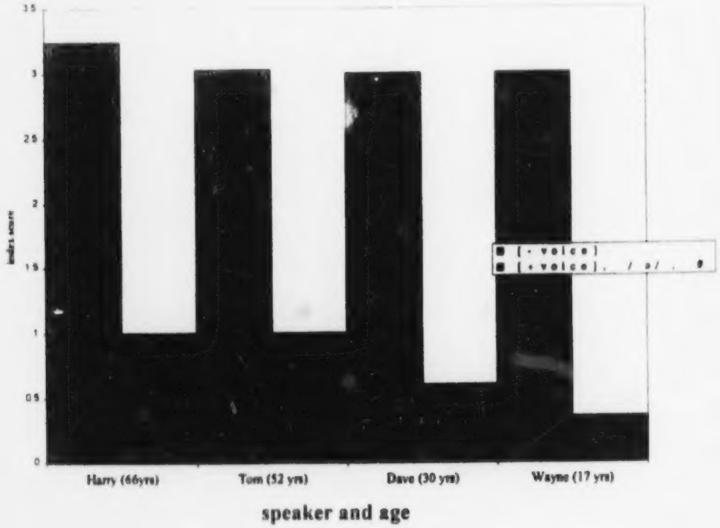


**Figure 8: onsets of /ai/ used by four central Fenland speakers from Wisbech**



## 5. Interdialectal [ɤ] Forms of /ʌ/

The origins of present-day /ʌ/ in Southern British English are complex. The largest source of this lexical set is Middle English **ŭ** occurring in words such as 'butcher', 'cushion', 'luck' and 'up'. Around London in the 16th century, certain but not all of the words in this class underwent unrounding and lowering (and more recently fronting) from [ʊ] to [ʌ] (and in some varieties, such as Cockney, [a]). In addition, a few /ʌ/ class words have their origins in ME **ō** such as 'blood' and 'flood', and others ('among', ME **ang/ong**, for example) have alternative sources. Furthermore, a number of borrowings have joined the /ʌ/ class: bungalow, yuppie (see Britain, in preparation).

The changes which led to the development of /ʌ/ from ME **ŭ** and **ō** were resisted in vernacular varieties of Northern England which retain [ʊ] in ME **ŭ** and have either [ʊ] or [u:] in the ME **ō** set and [ɒ] or [ʊ] in 'among', for example. Borrowings with [ʌ] in southern varieties typically have [ʊ] in the north, hence [bʊŋgələʊ] and [jʊpi:]. The dialect transition between the Northern /ʊ/ area and the southern area with both /ʊ/ and /ʌ/ straddles the Fens (see, for example, Chambers and Trudgill 1980:128).

The contact between Northern and Southern forms which arose following reclamation could potentially have had a number of linguistic outcomes. One possibility would be a lexically determined reallocation of Northern and Southern forms in the new intermediate dialect. This is what appears to have developed in the case of the /a - a:/ transition in words such as 'plant' and 'after' discussed earlier in this article. Alternatively, since the change to /ʌ/ is an innovation, we could perhaps have expected the southern, possibly more prestigious form to 'win' the dialect conflict and lead to the further gradual diffusion of /ʌ/ north and westwards. Neither of these possibilities appear to have materialised. Instead, the data suggest that a phonetically intermediate form between [ʌ] and [ʊ], namely [ɤ], has emerged as the norm in the central Fenland.

Unlike in the case of /ai/, however, the evidence suggests that this interdialectal form in the central Fenland has only very recently focused from a broad and diffuse range of variants [ʊ - ʊ̣ -

ɤ - ʌ̭ - ʌ - ɐ] used by speakers across the speech community. Furthermore, the interdialectal form has only focused among the young living in and around the central Fenland town of Wisbech, and not in other central Fenland locations, which remain largely diffuse.[3] Our real time data sources demonstrate both the long term diffuseness of the realisations of /ʌ/, as well as the more recent interdialect focusing.

Ellis considers the /ʊ - ʌ/ split to be one of the more important dialect distinctions in his research (1889:15–17) and his data provide evidence of thorough and detailed analysis of realisations in towns and villages along the isogloss. We therefore have quantitatively *more*, and, because of the checking and rechecking of data sources by his main fieldworker Hallam, *better* information about this variable than any other in the area under investigation. He notes that the town of Wisbech is mixed with interdialectal forms [ʊ - ɤ - ʌ - ɜ][4] used by young and old: he cites forms from a 13 year old boy and a 39 year old man as well as older residents of the town. Other central Fenland locations he labels 'mixed' or 'transitional' include: north Cambridgeshire (1889:249), March (252) and Chatteris (253).

Despite the impression one might gain from looking at some published maps derived from its data, the Survey of English Dialects (Orton and Tilling 1969) also provides evidence both of the existence of interdialectal forms, and the unfocussed nature of those interdialectal realisations. Whereas the 'northern'-type SED locations of Crowland and Lutton have [ʊ] in words such as

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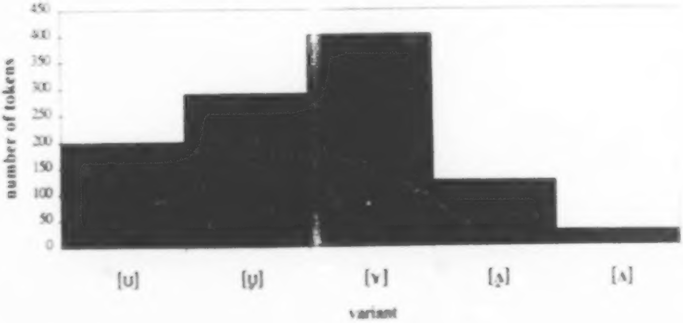
[3] The search for phonological and lexical constraints on variant choice is still underway (see Britain in preparation), but so far no significant tendencies have been found.

[4] Ellis does not use IPA. Based on his 'Table of Dialectal Palaeotype' (1889: 76-88) and other detailed discussions of the intermediate forms (e.g., p290-292), I have established the following transcription equivalents: Ellis (u) = [u], (*u*) = [ʊ], ($u_1$) = [ʊ̟], (*y*)= [ʊ̟ - ɤ], (∃) = [ɜ - ʌ]. He claims that 'I mean...merely to imply by the use of (*y*) that through this region generally the sound is transitional between (∃) and (*u*)...It cannot be supposed that in such an extensive region this peculiar transitional sound (*y*) remains absolutely the same...or that it is formed always by the same precise action of the organs of speech.' (1889: 292)

**Figure 9: realisations of /ʌ/ in the Chatteris speakers of the Chatteris corpus**



'money', 'thunder' and 'guzzle', realisations such as [ɤ - ʌ] are cited for the central location of Outwell and [ʊ - ʊ̞ - ʌ̝ - ʌ] for the central eastern village of Little Downham.[5] Chambers and Trudgill (1980) reanalyse the SED data, and demonstrate the transitional nature of this dialect 'boundary'. They categorise different lects in the Fens (and other parts of Eastern England and the Midlands) as having either 'fudged' forms (phonetically intermediate) or 'mixed' forms (the variable use of both the ingredient forms).[6]

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[5] It appears that there is some fieldworker inconsistency in the transcription of phonetic forms between [ʊ] and [ʌ]. The fieldworker for Little Downham, Warboys, Lutton and Crowland, Stanley Ellis, defines 2 intermediate variants [ʊ̞] and [ʌ̝]; Nelson Francis, the fieldworker for Outwell, only uses one [ɤ]. Although it is possible that this difference was deliberate, to reflect the production of different forms in different locations, my own data suggest that this is unlikely (see Britain 1991, in preparation). Albeit a minor difference, it has consequences for subsequent reinterpretations of this data, such as that carried out by Chambers and Trudgill (1980: 129-137).

[6] I found no mixed lects (variable use of both ingredient forms [ʊ] and [ʌ], but no intermediate [ɤ] forms) in my conversational data. Their presence in Chambers and Trudgill's analysis results, however, from the fieldworker inconsistencies mentioned in the previous footnote.

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The data from the Chatteris and King's Lynn archives further illustrate the unfocussed nature of the interdialect form. The results of the analysis of these corpora are in Figures 9, 10 and 11.

Finally, my own data corpus, collected in the late 1980s, demonstrates the gradual focusing of the central intermediate

**Figure 10: realisations of /ʌ/ in the Outwell speaker of the Chatteris corpus**

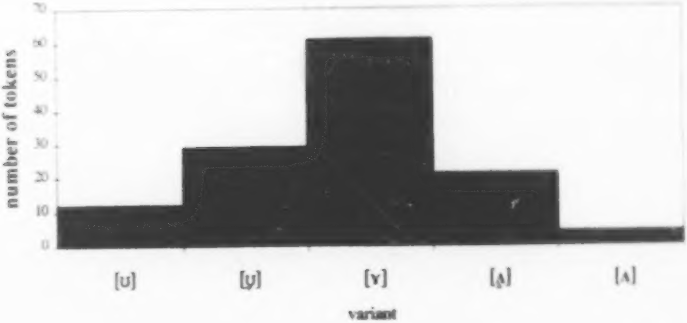


**Figure 11: realisations of /ʌ/ in the King's Lynn corpus**

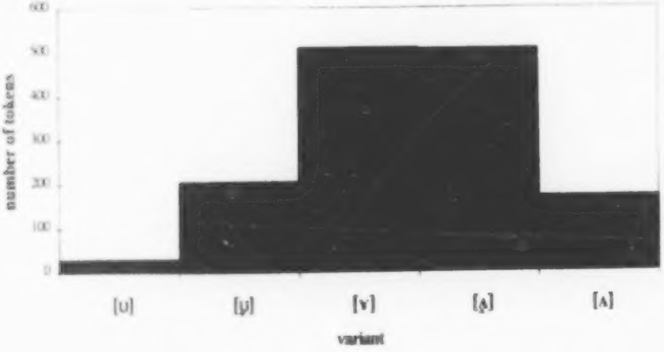


Figure 12: the use of /ʌ/ by four central Fenland speakers from Wisbech

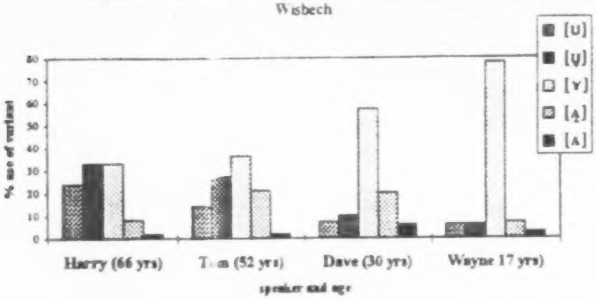
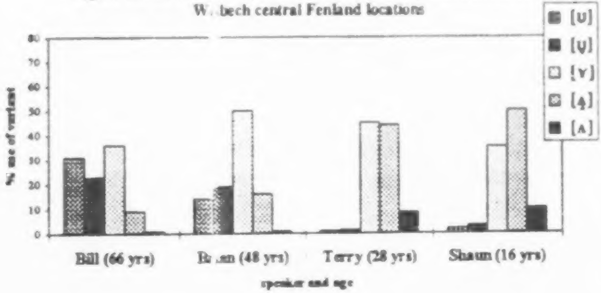


Figure 13: the use of /ʌ/ by four central Fenland speakers from non-Wisbech central Fenland locations



variant [ɤ] in and around Wisbech. Figure 12 shows the relationship between age and variant use for the four speakers whose consistent use of 'Fenland Raising' we saw earlier. It is only among the younger two speakers, particularly Wayne, that the [ɤ] form has focused. Older speakers and those outside Wisbech and its suburbs remain diffuse. Figure 13, for example, shows the variant scores of four speakers from other parts of the central Fenland.

## 6. New Dialect Acquisition: Explaining Variable Rates of Focusing

The question which the remainder of this article attempts to address is why certain forms (in this case 'Fenland Raising') focus more quickly during the koineisation process than others (interdialectal [ɤ], for instance). In trying to answer the question, we can draw on both social-psychological and linguistic explanations (Trudgill 1986, Chambers 1992, Kerswill 1996). Firstly we can look to the salience of the forms. Fenland Raising is a 'marker' (Labov 1972), with speakers across the Fens showing great awareness of regional and social variation of /ai/. It was regularly mentioned as locally significant – many informants in my own sample claimed to be able to spot Wisbech speakers by their use of /ai/ (but weren't able to accurately pinpoint what it was about /ai/ that distinguished Wisbech from elsewhere) (see Britain 1997). /ʌ/, on the other hand was a very unsalient sound altogether. Nobody in my survey mentioned it as being a feature which showed regional variation, despite the huge phonetic difference in the range of variants used in the Fens. Trudgill (1986: 51) has noted a lack of saliency of this feature more generally in East Anglia, and Ellis made a similar discovery over a century before. He writes 'a woman of Middleton [see Figure 3] married a man of Narborough. The woman called cup (kƎp) (= [kɜp] (DB)), the man (kʉ̥p) (= [kʊ̜p - kɤp] (DB)) and they had never noticed that they spoke differently, so that TH (Thomas Hallam) had the greatest difficulty in making the woman recognise the distinction' (1889:261). /ʌ/, although salient for linguists and dialectologists, clearly isn't for speakers living in the transition zone. It is possible, therefore, that the salience of Fenland Raising supports and is itself enhanced by its use as a local identity marker in the central Fens, distinguishing the area from both east and west. /ʌ/, on the other hand, lacks salience and is not used in this way. However, the evidence of focusing of an interdialectal form among youngsters in Wisbech for whom /ʌ/ is still unsalient suggests we need to look elsewhere for a full explanation.

In addition to social reasons, linguists have also sought linguistic explanations for variable rates of dialect acquisition

(Payne 1975, 1980, Trudgill 1986, Chambers 1992, Kerswill 1996). Payne's (1975, 1980) pioneering research on the acquisition of Philadelphia English by in-migrants found, for example, that while the in-migrants rather successfully acquired the fronting of the onsets of /u:/ and /ʌu/ and the raising of the onset of /ɔi/, none accurately acquired the tensing and raising of /æ/. In a synthesis and extension of the work on second dialect acquisition, Chambers (1992: 682-687) accounts for this finding in terms of rule complexity. He claims that in second dialect acquisition scenarios, simple phonological rules progress faster than more complex ones.

In Philadelphia, Payne's results demonstrate that the successfully acquired forms were all relatively straightforward, categorical phonetic changes, whereas the rule governing the tensing and raising of short /æ/ is extremely complex (Payne 1975, Chambers 1992, Labov 1989). Chambers provides further examples from his own research of Canadian children acquiring the southern British English of Oxfordshire. He finds that while they are relatively successful at devoicing /t/—a simple rule—they are much less successful at acquiring 'vowel backing', i.e., the /a–ɑ:/ split of southern England.

I would like to claim that we can look to the same sociolinguistic principle, that simple rules progress faster than complex ones, to explain why Fenland Raising focused more quickly in the Fens than interdialectal [ɤ]. First we must justify our application of the principles of second dialect acquisition suggested on the basis of speakers' relatively short-term contact with the target variety, to new dialect focusing where the contact is ultimately much longer term. Both second dialect acquisition and new dialect focusing, of course, involve dialect contact. However, in the case of the latter the focusing is being conducted not only by adults, but also by children acquiring their first variety. Roberts and Labov (1995) report that children native to Philadelphia are mostly successful in acquiring the very complex, lexically diffused /æ/ tensing/raising rule. There are, however, some important factors in new dialect formation, particularly of the sort witnessed in the Fens, which make the koineisation process in such conditions rather more complex than in the acquisition of varieties where a clear target dialect is predominant.

Robert Le Page, in whose work with Andrée Tabouret-Keller the notions of 'focused' and 'diffuse' in their sociolinguistic sense originate (Le Page 1978, Le Page and Tabouret-Keller 1985), claims that our choice of socio-linguistic variants represents an act of identity. The individual, he maintains, 'creates for himself the patterns of his linguistic behaviour so as to resemble those of the group or groups with which from time to time he wishes to be identified' (Le Page and Tabouret-Keller 1985: 181). Our ability to do so is constrained by the extent to which we can identify those groups, have adequate access to them and the ability to analyse their linguistic behaviour, have sufficient motivation to join those groups, gain feedback from them, and have the ability to modify our behaviour to become more like that of the target group.

Initially, in a new dialect scenario such as that in the Fens, or in other such settings where there was no (or only a very small) native population speaking the same language, these target groups to which one may focus either do not exist, because new groups have yet to form in the new speech community, or are absent, because the in-migrant groups left them behind, usually permanently, in their original speech communities. Such new dialect communities must therefore create the groups and develop afresh the stronger network ties (L. Milroy 1980, J. Milroy 1992) which can act as focal points. I have discussed elsewhere (Britain 1997) some of the potential motivations for joining such groups. The ability of the koineising dialect speakers to analyse the linguistic behaviour of their peers must be constrained by the wide mixture of varieties under contact, and feedback from other speakers, although accommodatory, is likely to be linguis-tically distinct and diffuse. Children in such scenarios are in a position of having to focus a new norm from a diffuse target variety spoken in a speech community only beginning to develop new social groupings, identities and distinctions. The fact that this process in the sparsely populated Fens began well before education was universal (no school environment, therefore, to encourage the development of wider peer group norms) further impedes focused koine development. In such an environment, principles of second dialect acquisition and those of new dialect formation seem comparable, notwith-standing the time differences involved.

Fenland Raising, as we saw earlier, and despite the inhibiting factors outlined above, focused quite quickly in the Fens. If, as our evidence suggests, it was present in the area around 1800, then it must have focused towards the time at which most of the major reclamation work was nearing completion. It is, moreover, a *relatively*[7] simple rule, the allocation of raised onsets to a position of phonetic naturalness before voiceless consonants in the same syllable, and open onsets to positions before voiced consonants, morpheme boundaries and schwa.

Interdialectal [ɤ], on the other hand, is only now being focused by the youngest speakers in one urban centre of the central Fens. The reasons for this are, I suggest, at least in part due to a number of linguistic factors which combine to make the focusing of one variant extremely complex:

- The complexity of the /ʊ - ʌ/ split: there is little phonological conditioning of this split, and even where there are tendencies, there are always exceptions. For example:
    - Many of the /ʊ/ class words have preceding bilabials/labiodentals (e.g. bush, full, put, woman, pudding, bosom), yet there are many exceptions (buck, fund, pump, won, punch, bucket).
    - Many of the /ʊ/ class are followed by /ʃ/ or /l/ (e.g. bush, push, wool, full), but again there are exceptions (rush, gush, lush, dull, gull, hull).
    - If the vowel precedes /g/ or /dʒ/, it is usually /ʌ/ (e.g. mug, bug, rug, budge, fudge, sludge); the principal exception is 'sugar'.
- The proximity of the area with no /ʌ/: the north-west of the Fens is linguistically 'northern' in English terms,

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[7] I say 'relatively', because non-natives who arrive in the central Fens as adults do not acquire it. Chambers had a similar finding for Mr J, originally from New York State, attempting to acquire the Canadian Raising of /au/ (Chambers 1992: 689). For most English people, acquiring Fenland Raising as an adult would equate to having a learn a distinction (albeit a phonetically natural one).

having /ʊ/ in both 'pus' and 'puss', for example. Because this is a rural area, school catchment and travel-to-work areas are large and it is possible for some speakers from areas with southern variants to go to school or work in places with no /ʌ/ and vice versa. Any movement beyond the locality will involve contact with speakers with different proportions of the different variants.

- The presence of variants of /ʌ/ which overlap with those of the /ʊ/ class: even those speakers who have /ʌ/ (in some phonemic sense, though not necessarily matching RP or other more southern varieties of English English) may well in some situations have variants of /ʌ/ realised as [ʊ], while on other occasions having [ʌ] or [ɤ] or some other variant *in the same word*.
- The wide phonetic range of variants present in the community: as mentioned previously, variants noted in my data range from [ʊ] to [ɐ].
- The presence of ongoing change in /ʌ/ in neigh-bouring regions: /ʌ/ continues to open and front in southern British English - Cockney has reached [a]. Speakers are therefore exposed to variants which continue to phonetically diverge.
- The lack of phonological or lexical conditioning of variant choice: initial analyses suggest that there is little or no significant phonological or lexical conditioning of the variants in the /ʌ/ class in this speech community.[8]

Together, these have severely inhibited the focusing of one particular variant, the intermediate [ɤ], such that it is only recently that one has emerged. Why it has emerged now is puzzling. One possibility is that it is linked to a change underway in southern British English which is unrounding and beginning to lower the vowel in /ʊ/ class words. However, Laver (1995), in a small pilot study, found that this change was being led by a considerable margin by middle class girls in the sample of secondary school children he studied, whereas my Fenland sample comprises only working class speakers An analysis of /ʊ/ will be presented in Britain (in preparation).

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[8] Research is continuing to try and find some. Having initially treated the /ʌ/ class as one set, the next stage is to separate out the words of different origins (i.e., ME ō from ME ŭ from borrowings and words of other origins) and run a further analysis for the effects of conditioning.

## 7. Conclusion

We have been able to track koineisation-in-progress in the Fens, despite the fact that the original contact began over 300 years ago. Some linguistic norms of the new variety crystallised quite quickly. We have seen evidence, for example, of Fenland Raising in even our very early dialectological sources. Other features such as interdialectal [ɤ] are only now showing evidence that a focused norm has evolved.

The goal of this article has been to demonstrate that this differential rate of koineisation is due, at least in part, to differences in phonological rule complexity. Just as Chambers (1992) and Payne (1975, 1980) have shown that second dialect acquirers successfully adopt simple rules of the new target variety much more quickly than complex ones, so it has been demonstrated that, exposed to diverse, diffuse and mixed target varieties, speakers in the Fens more readily focus koineised forms with simple phonological rules than those with complex rules, irregular, lexically determined outputs and new phonemic distinctions. Fenland Raising is a relatively simple and phonologically predictable rule with no exceptions. Much more complex, however, is the rule which produced /ʌ/ – it is a phonologically unpredictable, lexically determined rule originating from the incomplete merger of ME **ō** and **ŭ** which took place as the latter was undergoing a split which led to the development of a new phoneme. The complexity is made more extreme in the Fenland speech community by contact with lects with a wide range of variants, including some which do/did not have /ʌ/ at all. It is apparent that, in this case, the nature, location and timing of the contact, and the complexity of this linguistic feature have conspired against those creating a new dialect in the Fens to make the crystallisation of [ɤ] a slow and laborious sociolinguistic process.

More detailed investigations of a range of different speech communities in the *process* of focusing new linguistic norms at all levels are clearly required if we are to *explain* the outcomes of contact and koineisation. A more fruitful and extensive dialogue with other areas of language contact research (e.g., pidginisation and language death) will doubtless move this endeavour forward. The constraints on the phonological focusing of Fenland English provide one small clue as to the direction in which we must look.

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# Sociolinguistic Coherence of Changes in a Standard Dialect

J.K. Chambers

Canadian English (CE) has been a relatively conservative dialect for most of the century or so that it has existed as a focused, standard variety. It is only in the last few years that we have begun to observe significant changes in progress. One of these is (aw)-Fronting, which alters the onset of the diphthong /Au/ in words like *house*, *rouse* and *how* (Chambers 1980, 1989, Hung, Davison & Chambers 1993). Another is (ê)-Lowering, in which the high lax vowel of words like *finish*, *since* and *until* is sometimes heard as mid [E] (Meechan 1996).[1]

Simultaneous with these phonological changes are numerous changes involving pronunciation and lexical variants. Though some of these have been recognized as changing for some time from casual observations, we now have the wherewithal to view them systematically by examining their use by a large sample of men and women ranging in age from 14 to over 80 in a large urban region in southern Ontario. The Dialect Topography of the Golden Horseshoe (Chambers 1994) surveys the western tip of Lake Ontario from Oshawa to Niagara Falls, including the conurbations of Scarborough, Toronto, Mississauga, Oakville, Burlington, Hamilton, St. Catharines and Welland. This 250 km strip is the most populous region of Canada, the home of more than one-sixth of Canada's population. The survey sample is a cross-section of 1,015 people, made up of 935 Canadians and 80 Americans across the border in the Niagara Falls-Buffalo region.

In this article, I examine some of the variables which are undergoing changes. The macro-survey method gives us a kind of snapshot of the progress of the change in each case, allowing inferences from apparent-time distribution about the rate of change, its history, and the shifting patterns of currency for each of the variants. In most cases, some real-time evidence is also available. The amount of change is perhaps surprising, but its coherence, as I will show in the final section, is explicable from its social embedding.

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[1] The change may become a push-chain according to both Meechan (1996) and Clarke, Elms & Youssef (1995), lowering all the front lax vowels.

In what follows, I discuss three changes: the lexical replacement of *serviette* by *napkin*, the phonological change of yod-dropping in *news* and *student*, and the morphological replacement of *dived* by *dove*.[2] These changes are interesting in their own right, each with their own histories and complexities. Together, they establish a cumulative pattern of rapid change that might be expected to cause some consternation or evoke comment from the guardians of the culture. The fact that it does not—that it, in fact, appears to be taking place without public awareness—leads to the considerations in the final section.

## 1. Changes in Standard Canadian English

### 1.1. Serviette/Napkin

The responses for this lexical item came from two questions on the Dialect Topography survey, viz.:

> At meals, people are sometimes given a cloth to wipe their fingers on. What do you call it? ____________
>
> At meals, people are sometimes given a paper to wipe their fingers on. What do you call it? ____________

Two or three generations ago, most Canadians would have answered *serviette* for both questions. The use of the word *serviette* was generally recognized as one of the ways in which CE differed from American English, in which the standard term is *napkin*. The American respondents at the Niagara border said *napkin* in 95% of their answers to the first question (about the cloth finger-wiper) and 92% to the second (about the paper one). (The other answers were minor ones: *towelette*, *finger cloth*, *dish rag*, and so on.)

*Serviette* is a British term. It originated as a loanword from French *la serviette*. In Scotland, the word has a long, honorable, unbroken history, though variously spelled (*servad/*

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[2] The Dialect Topography project is supported by the Social Sciences and Humanities Research Council of Canada. I discussed several other changes as well in my presentation at NWAV at the Sahara, Las Vegas, in October 1996. One of them, the replacement of *chesterfield* by *couch*, is discussed in detail elsewhere (Chambers 1995).

*servat* and *servet* in Warrack 1911). In England, its history is shorter and less honorable: according to the OED, it became a fashionable loanword in England in the 19th century but fell out of fashion and "latterly has come to be considered vulgar." Its unfashionableness was evident when Ross (1956) placed it on his list of non-U words in an influential discussion of upper-class (U) and lower-class (non-U) words.

Notwithstanding its status in England's haute couture, *serviette* holds its place there as the most popular word for the cloth or paper hand-wiper. The variant term is *table napkin*, with *table* necessarily specified because in England a plain *napkin* is a *diaper*.

The general use of *serviette* across Canada could have come from England but might well have come from Scotland, as one of the linguistic vestiges of the Scottish presence in Canada from the earliest times.

Whatever its source, *serviette* prevailed in the first half of the century. By the time of the first concrete evidence of its use in a Canadian study, Avis's survey (1954) of a small sample along the Canada-U.S. border, it was already losing currency; this is not surprising, since usage surveys pick on changing features rather than stable ones. Avis's results at mid-century were as follows:

| *serviette* | *napkin* | both |
|---|---|---|
| 69% | 21% | 10% |

The decline of *serviette* and the rise of *napkin* is obvious in a comparison with the Golden Horseshoe responses about 42 years later in 1992:[3]

| | *serviette* | *napkin* | both |
|---|---|---|---|
| cloth | 16% | 80% | 4% |
| paper | 37 | 60 | 3 |

It is clear, first, that the American word, *napkin*, is supplanting

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[3] These figures amalgamate the responses according to headwords, so that answers such as *paper serviette* or double answers such as *serviette/paper towel* count as *serviette*, and answers such as *table napkin* and *napkin/finger towel* count as *napkin*. In all, there were 50 different answers but over 90% had either *serviette* or *napkin* as the headword.

*serviette*, and, second, that the decline has been slower for the paper object than for the cloth object. But these figures are gross from a sociolinguistic viewpoint because they treat the respondents as an undifferentiated mass. When we break the respondents into social groups, as in Figure 1, the social dynamics of the lexical replacement become clearer.

Figure 1, like all the other figures in this article, divides the 935 Canadian respondents in the Golden Horseshoe by age, with the oldest (octogenarians and a few nonagenarians) on the left and the youngest (teenagers) on the right. In between, the respondents are grouped by decades. Fgure 1 plots the ascendancy of *napkin*; the figure for the decline of *serviette* is, needless to say, its mirror image.

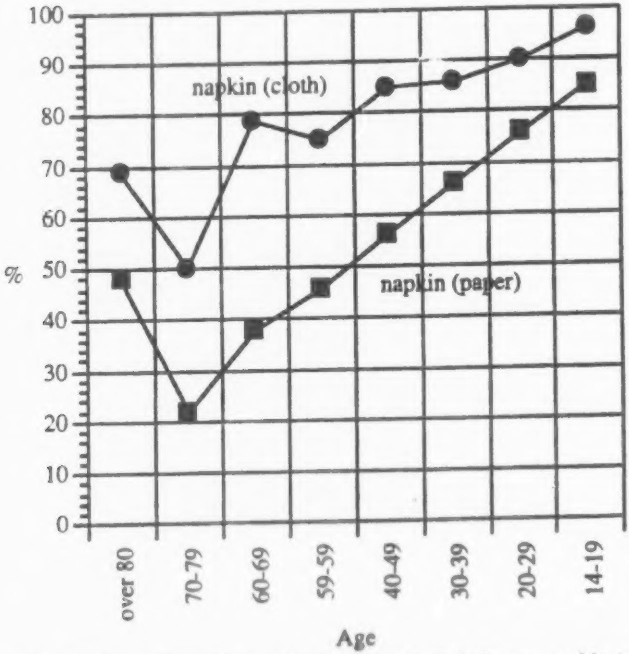

Figure 1—Use of *napkin* for the cloth object and the paper object by Canadians of different ages in the Golden Horseshoe.

The trajectory of the two lines on the graph, one line for each of the questions asked, shows a similar upward trend from oldest to youngest with a fairly steep decade-by-decade increase in the use of the word *napkin*. (I have no explanation for the anomalous responses by the 80-year-olds. Clearly, they are bucking the trend of the data, but the result cannot be accidental because it recurs in both questions.) *Serviette* evidently lost ground first as the name of the cloth hand-wiper. In the 70-year span of the Golden Horseshoe respondents, it is not the majority usage for any age group, whereas for the paper hand-wiper it remains the majority usage for people over 40. For many of these older people, then, the word *serviette* took on a specialized meaning as a paper finger-wiper while the new word *napkin* meant a cloth one. A new general-purpose dictionary, *Gage Canadian Dictionary* (1997), defines *serviette* simply as "a paper napkin," thus embalming the distinction made by its middle-aged readers. That dictionary is already outdated for younger readers. Figure 1 shows that for people 30 and younger the gap between the two words narrows to the point where they use the word *napkin* almost exclusively for both forms, but the few who use *serviette* do not restrict it to either cloth or paper.

The process of change is most dramatic for the cloth object. The replacement of *serviette* by *napkin* took place abruptly in the speech of the people born in the 1930s, that is, the ones who are now in their 60s. The change between them and the people born in the decade before, the 70-year-olds, is great—about 30% of them replaced *serviette* with *napkin*. The main locus of this change, then, appears to be the 1940s, the formative years for the 60-year-olds in the survey.

### 1.2. Yod-Dropping

The merger of /u/ and /ju/ after coronals is nearing completion in many parts of the English-speaking world, including middle-class England, the northern U.S., and Canada.

The generality of this linguistic change would normally deprive it of special interest in a discussion of changes taking place specifically in CE but this change may be more significant in Canada than in some other places. Two commentators claim that yod-retention—the pronunciation of /ju/ after coronals—is a prestige feature in CE. Thus, according Pringle (1985: 190):

> ...there is one shibboleth of pronunciation which Canadians use to mark their difference from Americans: the pronunciation of 'u' and 'ew' spellings after t, d, and n. Canadians think they know that Americans invariably say 'toon' for 'tune', 'doo' for 'dew', 'nooz' for 'news'. They also believe that the British do not do these things. Consequently when they want to stress how their English differs in sound from American English, they are particularly likely to settle on these sounds.

Clarke (1993), citing Pringle, suggests that "glide retention constitutes a stereotypical Canadianism in the North American linguistic context" (p. 86) and calls it "an apparently highly salient marker of Canadian linguistic identity" (p. 87).

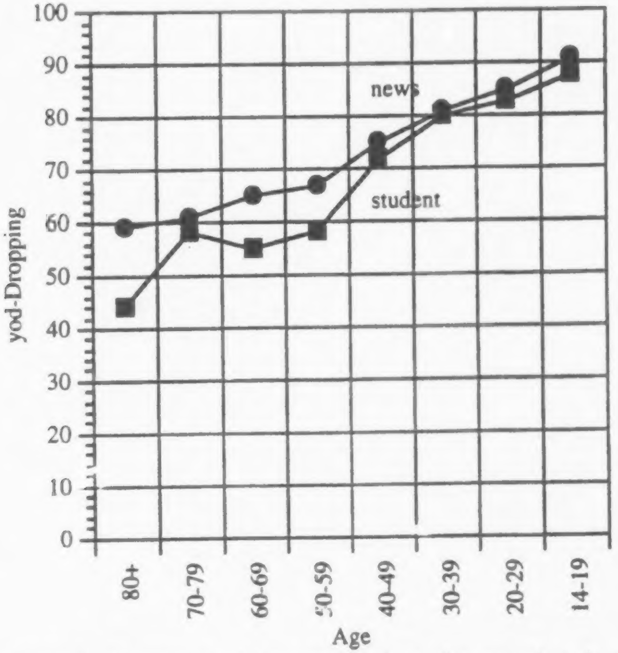

Figure 2—Absence of yod in pronunciations of *news* and *student* by Canadians of different ages in the Golden Horseshoe.

I must say that these opinions are not corroborated by my experience. I have never heard anyone extol the pronunciation *st*[ju]*dents* for ***students*** or *n*[ju]*s* over *news*—not teachers or parents or even nuns. They are also not corroborated by my survey data as shown in Figure 2, which shows that yod-dropping is on the increase but that it has been a majority feature for at least the 70 years of this survey and presumably longer than that.

The trajectory of change in Figure 2 is very mild. The percentage of yod-dropping is relatively high for the oldest respondents and it inches higher for the younger ones. It is a change that appears to be nearing completion. For people under 40, the pronunciations of both words occur without yod for more than 80% of the respondents. Among people over 40, the word *student* retained its yod somewhat longer than *news* did, but after that the two words converged. Although the slope of the line shows that yod-dropping is still increasing at the present time, it also shows that it is a minority pronunciation even for the 70-year-olds, that is, even for people born in the 1920s.

If Canadians were in the habit of 'putting on airs' by pronouncing ***students*** as *st*[ju]*dents* and *news* as *n*[ju]*s* , they would surely do so when answering the language-survey questionnaire for the Dialect Topography project. They do not. Yod-dropping appears to be both common and unmonitored.

### 1.3. Dived/dove

The form of the past tense of the verb *dive* appears to be one of the oldest variables in CE. In 1857, ten years before Confederation, the Rev. A. Constable Geikie complained about the form *dove* as a "lawless and vulgar innovation" (Chambers 1993). More than a century later, the two forms *dived* and *dove* were still contending with one another with roughly equal numbers as indicated by these survey results:

| | *dived* | *dove* | both |
|---|---|---|---|
| Avis (1954) | 38% | 59% | 3% |
| Scargill & Warkentyne (1972) | | | |
| adults | 48 | 45 | 6 |
| students | 39 | 49 | 12 |
| Chambers (1979: 175) | 53 | 47 | — |

These figures appear somewhat erratic, probably because of inconsistencies between the samples. Avis polled students and acquaintances mainly (but not exclusively) in the Kingston area. Scargill & Warkentyne surveyed high school students and their parents across the country. Chambers surveyed older, educated night-school students in Toronto (profiled 1979: 172). The numbers do show significant representation for both variants, suggesting that the *dived/dove* variability was stable throughout the three decades covered by the surveys, with roughly half choosing the innovative *dove* form.

The Dialect Topography of the Golden Horseshoe asked respondents to supply the past tense of *dive* in two different sentences:

Yesterday he _______ into the quarry.
The submarine ______ to the floor of the sea.

The reason for asking for two responses is that some speakers claim to use *dove* with animate subjects only (as in the first sentence), and *dived* with inanimates. The responses provided only mild support for that distinction, with 9.3% answering that way. The decisive result is in the predominance of *dove*: only 8.2% used *dived* in both sentences but 74% used *dove* in both.

The century-long competititon between the two variants has tipped decisively in favor of *dove*. This change has been noticeable in casual observations for a few years now. For instance, an undergraduate linguistics student told me last year that she doubted that *dived* was used by anybody. "It just sounds like baby talk," she said—like *bringed* and *goed*.

The new dispensation is evident in Figure 3, which plots the *dove* responses for the two sentences (he.dove for the animate subject, sub.dove for the inanimate) according to the age of the respondents.

Figure 3 shows that more than 82% of all respondents use *dove*, and about 90% of respondents under 30 use it. For people under 60, the graph shows a relatively flat trajectory. The significant adoption of *dove* takes place with the 50-year-olds, people born in the 1940s. The graph looks like the top of an S-curve, suggesting that we are viewing the change in its final stages. The two oldest groups appear to be transitional. Although the change to *dove* was well advanced in their formative years—the 1920s and 1930s—their inconsistency suggests that they are aware of the its novelty and perhaps sensitive to its 'correctness'.

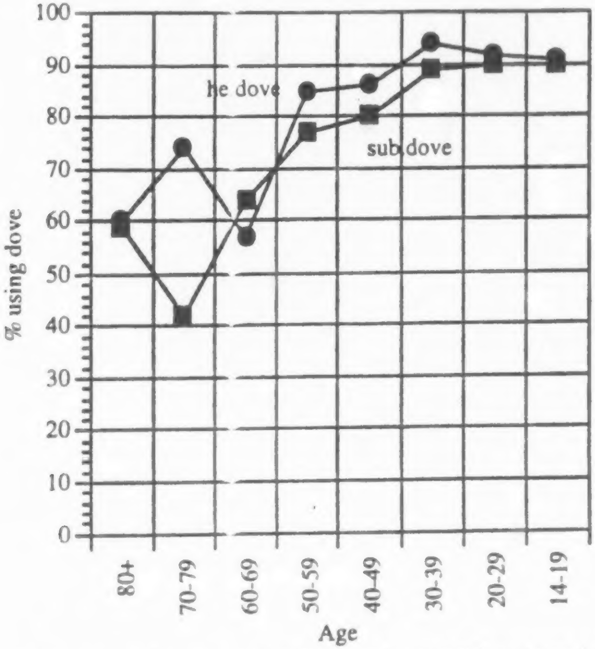

Figure 3—Use of *dove* not *dived* by Canadians of different ages in the Golden Horseshoe.

The ascendancy of *dove* over *dived* in the Golden Horseshoe represents an American incursion in CE. *Dove* is the form used on the American side of the Niagara border almost unanimously, as these figures for the American sample in the Dialect Topography show

| | *dived* | *dove* |
|---|---|---|
| animate subject | 2.5% | 97.5% |
| inanimate subject | 4 | 95 |

But *dove* is not a General American form. Historically, it originated as a Northern form (Davis & McDavid 1950: 270), and its currency until recently was mainly in the northeastern quarter of the United States. Now it has spread not only into Canada but also into the American South. Bernstein (1994) reports that Texas A & M students show "almost universal preference...for *dove*," and high school students in Silsbee, Texas, also prefer it in significant proportions:

| | *dived* | *dove* |
|---|---|---|
| Texas students (Bernstein 1994) | 27% | 73% |

The importance of this development in the American South will be discussed in the final section.

## 2. Aggregating the Changes

We have looked at only a few cases of change in progress in CE. Several others might have been discussed as well, including phonological changes as well as additional lexical and pronunciation variables (see note 2). But these few cases are sufficient to provide a useful approximation of what appears to be a headlong rush to remake standard CE at the approach of the millennium.

Figure 4 aggregates the variability we have discussed above to provide a simultaneous image of the progress of the changes.

One clear conclusion that emerges from Figure 4 is the coherence of the change. In sociolinguistics we have long been aware that group results are more revealing than the results for any individual in the group if the phenomenon underlying those results is empirically sound. In other words, the more you aggregate data for a sociolinguistically significant change, the more coherent it becomes. Figure 4 emphasizes the striking diagonal trend in what might otherwise appear to be disparate data. In effect, the figure smoothes out the vagaries of idiosyncratic developments such as the anomalous behavior of the octogenarians adopting *napkin*, the retention of yod in *student* by some speakers after losing it in *news*, or the minor influence of subject animacy on choices of *dived* or *dove*. Those effects are still visible in Figure 4—the data is exactly the same there as in the previous figures—but their relevance in the larger scheme of the changes is put into perspective.

The diagonal thrust leaves the lower-right half of the figure completely empty. (If we got a result like this in a regression analysis, we would be gratified by such a robust positive trend.) Obviously, the result is not exactly linear: it is megaphone-shaped, broad at the left and narrowing gradually rightward. In fact, the 70-year-olds have a range of about 55% (20%-75%) but the teenagers have a range of only 15% (83%-98%). In other words, the speech of older people is less predictable than the speech of younger people.

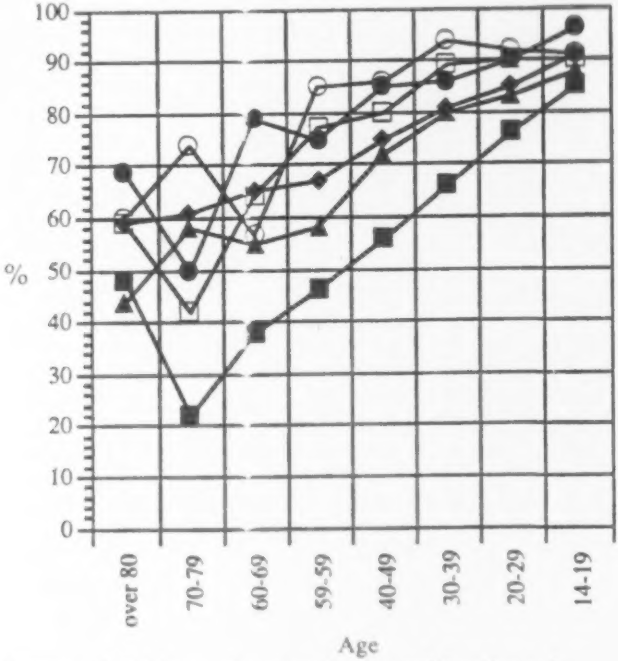

Figure 4—Variable use of *serviette/napkin*, yod-dropping and *dove/dived* by Canadians of different ages in the Golden Horseshoe.

Figure 4 also demonstrates the liberating effect of viewing sound change as a dynamic process. If we had only a static view of these changes—one record from, say, the 1920s and a comparable record from the 1990s—we would surely have to conclude that the change in CE in these years was cataclysmic. We would undoubtedly speculate that individuals living through such a linguistic upheaval must have been disoriented and confused. Instead, when we see the changes as a continuous process embedded in the social fabric, we recognize that they are taking place as an orderly progression, with small—and socially manageable—increments along the age continuum.

While the poles of the continuum—the very oldest and the very youngest people in the society—sometimes differ by as much as 70 points, the intermediaries—represented here in decade intervals—seldom differ by more than ten.

The linguistic result may be cataclysmic but its social embedding is structured and lucid.

Finally, changes such as these are often in the direction of American variables. Several commentators, myself included, have concluded from this that CE is becoming Americanized. That view now seems simplistic. In the replacement of *dived* by *dove*, for instance, we have a prototype for a change that is unmistakeably in favor of an American variant. It is, in fact, the Northern variant. However, we also discovered that Texas English and other southern American varieties are making exactly the same change as CE by adopting *dove* as the past tense form of the verb. Are we to conclude, then, that Texas English in 'Americanizing'? Obviously not.

What is happening is the development of a continental standard language in North America. The old regionalisms remain to some extent: varieties such as Southern American, Northern American, New England, and Canadian remain identifiable by the presence of certain features. But a number of features are regularizing under the influence of increased mobility that brings people from various regions into face-to-face contact with unprecedented frequency. Often this regularization favors Northern American features, but it does not always do so. For instance, a change that is spreading rapidly in the United States right now is the merger of the low back vowels /ɔ/ and /ɑ/. This change is an incursion into Northern standard speech that is spreading from CE and a large region of the western States including California. In a few generations, it appears that CE will lose the distinction it now holds as the only standard variety of English in the world that pronounces *cot* and *caught* the same. It will be a feature of North American English, the new continental standard.

Will we then say that the Northern U.S. accent has 'Canadianized'? We could, though we probably will not. Modesty forbids it, but more important it is not accurate. Neither is it accurate to say that CE is Americanizing as it adjusts to the continental standard that is reshaping many middle-class varieties in North America.

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# Adaptive Sociophonetic Strategies and Dialect Accommodation: /ay/ Monophthongization in Cherokee English[*]

Bridget L. Anderson

## 1. Introduction

Developing varieties of Native American English offer unique insights into the sociolinguistic dimensions of language contact situations. More specifically, an investigation of how these groups utilize assimilative features, such as those adopted from local, non-Native American contact communities, and, at the same time, features unique to the Native American English variety, such as those which have developed as a result of source-to-target language transfer, is particularly diagnostic in terms of how Native Americans situate themselves sociolinguistically with respect to surrounding non-Native American contact communities and other Native American groups. Such an investigation must take into account the effects of source-language interference, the English language learning situation, and dialect competition from surrounding non-Native American communities.

Previous studies of Native American varieties of English in the Southwest (Craig 1991; Leap 1977; Wolfram et al. 1979, Wolfram 1980, 1984), indicate that these varieties utilize both the assimilated dialect features of surrounding non-Native American

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communities and source language transfer features. Leechman and Hall (1955) even propose that a more expansive pan-lectal variety of English developed out of the various situations in which English was learned and used in relation to the Native American language. Although some sociolinguistic situations involving Southwestern varieties have now been investigated, comparable situations in the eastern United States have received little attention from the linguistic research community.

This study is a preliminary investigation of a language contact situation between two very distinct linguistic groups who have been in close contact with each other for at least the past two hundred years in isolated, mountainous Graham County in the heart of the Great Smoky Mountains of Western North Carolina. Appalachian whites of the area speak a Southern Highland variety of English, comparable to what is described in general by Wolfram and Christian (1976) and more particularly, for the Smoky Mountain region, by Joseph Hall (1942). The Snowbird Cherokee of the Eastern Band of the Cherokee Nation who reside in Graham County primarily spoke their ancestral language of Cherokee until early in this century when a shift toward bilingualism in Cherokee and English began. An investigation of the contact situation in Graham County, focusing on the patterning of a diagnostic vowel variant, the monophthongization of /ay/ as in *ride* [ra:d] and *type* [ta:p] for the two ethnic groups will yield insights into the mechanisms of language contact, language assimilation, and language shift. The monophthongized variant of /ay/ is widespread throughout the South and is a prominent feature of Appalachian English. This variable is expected to be a fairly diagnostic variable of assimilation.

## 2. The Cherokee Situation in Western North Carolina

Neely (1991:15) estimates the Cherokee to have been living in the Southern Appalachian Mountains for at least the past four thousand years. Furthermore, she notes that in the early part of the nineteenth century the estimated 20,000-member Cherokee nation was one of the largest Indian nations north of Mexico. One-fourth to one-half of the 16,000 Cherokee people forced to march west in 1830 to what is now Oklahoma in what has become known as the "Trail of Tears" died during their tragic relocation (Neely 1991:22). This event, of course, considerably altered the lifestyles of the surviving members of the Cherokee Nation. About one thousand Cherokees hid in the Great Smoky Mountains in order to elude the forced removal, and it is their descendants who now make up the Eastern Band of the Cherokee situated in Western North Carolina.

The Eastern Band consists primarily of Cherokees living in Western North Carolina on the Qualla Boundary of Swain and Jackson Counties and, fifty miles to the southwest, in the Snowbird and Cheoah mountains of Graham County. There is also a small number of Eastern Cherokees who live in the Tomotla area of Cherokee County. The Eastern Band holds 56,572 acres of communal lands in Swain, Jackson, Cherokee, and Graham Counties in Western North Carolina (Neely 1991:24).

## 2.1. The Sociolinguistic Situation

The Snowbird Cherokee are considered to be the most traditional of the three Cherokee groups residing in Western North Carolina, and it is this community that is the focus of the present study. The Snowbird group is distinctive from other groups of Cherokees in Western North Carolina in terms of Native American "traditionalism" and "conservatism," their assimilation to encroaching white culture, and their percentage of native Cherokee speakers.

The Snowbird Community comprises only a small percentage of Eastern Cherokees. Most of the 9,000 members of the Eastern Band live on the Qualla Boundary. The 380-member Snowbird Community, however, comprises only 6.9 percent of all resident North Carolina Cherokee and 5.2 percent of Graham County's total population (Neely 1991:38), making them a small minority in relation to Qualla Boundary Band members and the 7,217- member white population of Graham County (1980 census).

Snowbird has the highest percentage of full-bloods of any Eastern Cherokee community (Neely 1991:7). The government "standard" for self-identification as an American Indian is that a person must demonstrate that he or she is "certifiably" of at least one-eighth American Indian ancestry. Full-bloods, of course, are of total Native American ancestry. Native American activist and scholar Ward Churchill (1994) notes that in 1900 about one-half of federally recognized, racially defined Native Americans in the United States qualified as "full-bloods." By 1990, this proportion was only at about twenty percent (Churchill 1994:92). In spite of the significant decline of the number of federally recognized full-bloods among American Indians, the Snowbird Community has maintained a large percentage of full-bloods. In the mid-1970s, 91.4 percent of Snowbird Cherokee adults were legally three-fourth to full-blood range (Neely 1991:7).

Perhaps the high percentage of full-bloods in the Snowbird Community is the reason the community has also been successful in maintaining its ancestral language. Full-bloods tend to have more traditionalist Native American values, such as native language maintenance, than people with minimal Native American ancestry. Most adults over age forty in Snowbird are bilingual, while the significantly higher populated Qualla Boundary is estimated to have less than 10 percent native language speakers (King 1975:2). The tiny Snowbird Community comprises only 6.9 percent of the North Carolina Cherokees, but it contains nearly one-third of the total Cherokee-speaking population in the East (Neely 1991:147).

The Snowbird Community is unique in its success in maintaining a large number of full-bloods and native language speakers. Fifty miles to the northeast of Snowbird in the Qualla Boundary the Cherokee language seems to be disappearing rapidly. Both groups have had extensive contact with white English speakers. The high percentage of ancestral language speakers in the Snowbird Community indicates that the Snowbird Cherokee have made a group effort to maintain their cultural identity as "traditional" Cherokee Indians. The Qualla Boundary group has a high percentage of what one of my informants referred to as "white Indians," or people with minimal Cherokee ancestry who both look and "act" like white people. Snowbird, however, has few "white Indians." Consequently, Snowbird Cherokees are a much more homogeneous group than the more acculturated Qualla Boundary group. Snowbird Cherokee, therefore, do not face the same intraethnic competition between traditionalist Native American values, which seem to have a strong connection with being a full-blood Cherokee, and anglicized "white Indian" values of people with only minimal Cherokee ancestry. Several Snowbird informants indicated to me that they consider themselves, but not Qualla Boundary Cherokees, to be "real Indians."

Perhaps one factor that has aided Snowbird Cherokees in maintaining their ancestral language and other important cultural traditions is the geographical isolation which has served to protect them from tourism, which affects many Native American reservations, including the Qualla Boundary. Snowbird is unique in that it has virtually no tourism, due in large part to the depressed economy and rugged terrain of the county in which it is situated. Eighty-five percent of Graham County is undeveloped forests, some of which are among the only virgin forests east of the Mississippi. Only one other North Carolina county has less land cleared for industry and farming (Neely 1991:37). Cherokees in this county continue to reside on their ancestral homeland, once the Cheoah township of the Cherokee nation, which the Cheoah Cherokee actually purchased from the state in the weeks immediately following the removal (22). The Snowbird Cherokee are descendants of the Cheoah and continue to reside on this land, 2,249 acres of scattered tracts concentrated in what is commonly referred to as the Snowbird area of Graham County. Thus far, I have conducted sociolinguistic interviews with twenty-five Cherokee English speakers of different ages in the area. For preliminary comparative purposes, I have also conducted a few interviews with Cherokees from the Qualla Boundary and members of the white contact population of Graham County. Evidence gleaned from these interviews demonstrates that both Cherokee groups exhibit at least some assimilation to the language norms of the surrounding mountain white communities. In this study, I will attempt to quantify the degree of assimilation through a quantitative analysis of monophthongal /ay/, as in [ra:d] *ride* and [fa:t] *fight*, a prominent feature of Appalachian English and one of the most salient features of Southern speech in general.

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## 3. The History and Status of Monophthongal /ay/

The monophthongization of /ay/ as in [raːd] *ride* and [laːt] *light* is one of the most salient features of Southern speech (Bernstein and Gregory 1993). In an investigation of how this variable patterns in Cherokee English there are several linguistic and sociolinguistic dimensions unique to a contact situation that must be considered. First, it is important to determine what the relationship of /ay/ is to the phonological system of Cherokee, the first language of most middle-aged and older speakers in the Snowbird Community. A second consideration is the history and status of /ay/ in the white contact community. In addition, since Snowbird has a high percentage of bilingual speakers, it is important to consider the status of /ay/ in the English language learning model for older and middle-aged speakers who learned English in school. And finally, what is the synchronic sociolinguistic distribution of this variable among current speakers?

In a community where most adults over age forty are bilingual in Cherokee and English, linguistic interference from the source language to the target language is to be expected. Thomason and Kaufman (1988:37) indicate that in the case of language shift, interference will most likely be structural—that is, phonological, phonetic, or syntactic—interference rather than lexical interference. Although Cherokee has no clear-cut cases of tautosyllabic nucleus combinations such as [aI], vowel combinations with epenthetic [y], such as [aye] and [ayo], do occur (Huff 1977:23). Thus, there is a phonological model for upgliding in the source language, although it is not tautosyllabic.

There is also, however, a phonological model for monophthongal [aː] in the source language. Huff (1977) observes the following vowel-glide sequence patterns for Cherokee: /a/ plus any vowel except /a/ and, most significantly, /i/, in the underlying form yields a surface form of [a] + epenthetic [y] + vowel. A vowel combination of /a/ + /i/ or /a/ occurring in the underlying form will, therefore, be realized in the surface from as [a]. In other words, when /a/ precedes /a/ or /i/ in the underlying form of the source language the resulting surface form is [a], but when [a] is combined with vowels other than /i/ or /a/ in the underlying form the surface form will be realized as a vowel-glide sequence. So, the source language of Cherokee provides models for both monophthongal [a:] and vowel-glide sequences involving [a] + epenthetic [y] + vowel.

The next consideration, then, is the history and status of /ay/ in the surrounding white contact community. Hall (1942:43) describes a pattern of glide weakening for his data from the Smoky Mountains, indicating that /ay/ is most often realized as [a:] in all phonetic environments. He notes, in fact, that although the tendency in general Southern speech at that time was to monophthongize /ay/ in voiced environments but to retain the diphthong in voiceless environments, the pattern did not hold true for Smoky Mountain English, where monophthongal [a:] was preferred in all phonetic environments (Hall 1942:43). Kurath and McDavid (1961) found tokens of [a$^{ə}$] and [a$^{ɛ}$] in Western North Carolina for the word *twice* and tokens of [a$^{ɛ}$] in Macon County, which borders Graham County, for the words *nine* and *might*. The data for the word *might* provided by the LAMSAS office at the University of Georgia[*] indicates /ay/ was monophthongal in Western North Carolina in both prevoiced and prevoiceless environments in the 1930s, and that prevoiceless diphthongal /ay/ was already a relic form in this area. Wolfram and Christian (1976:64) found that Appalachian English speakers in their study participated in the monophthongization of /ay/, and they determined the linguistic constraint order for following phonetic environments for this feature to be pause > voiced obstruent > voiceless obstruent. This ordering falls in line with the traditional constraint pattern for Southern speech and is in contrast to Hall's (1942) observation that /ay/ was monophthongal in all following phonetic environments in the Smoky Mountain region of Western North Carolina. Williams (1992:14) also contends that /ay/ in Appalachian English is most often monophthongal, and, although he does utilize the classic example of the general Southern pronunciation of [a:s] for *ice*, he does not go into a discussion of the effect of following phonetic environment on the patterning of the variable. Pederson

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[*] Thanks to William A. Kretzschmar, Jr. for providing the list manuscript.

(1983:73) indicates that /ay/ for seventy East Tennessean informants is realized most often as a monophthong and, less frequently, as a short diphthong. He further notes that /ay/ is typically monophthongal before voiceless consonants, as in *write* or *light*, for all age and social groups of the region (75).

My data for the white contact population of Graham County for /ay/ indicates that current-day Smoky Mountain English is largely monophthongal for /ay/ in all following phonetic environments. Tabulations of the /ay/ variable for nine lifelong white residents of Graham County indicate that these informants are categorical monophthongizers of /ay/ in all phonetic environments. So the current contact model is one of expansive and generalized monophthongization.

Another important consideration is, of course, the contact model of the initial language learning situation of many of the middle-aged and older speakers. Beginning in 1880, white Quakers began using formal education in an attempt to acculturate the Cherokee into Anglo-American society. These schools emphasized Anglo-American culture and values and gave little attention to Cherokee culture (Neely 1991:29). The teachers of these schools were not local to the area. They are not expected, therefore, to have served as the agents of transmission for monophthongal /ay/.

The Quaker schools closed when the Bureau of Indian Affairs (BIA) gained control of the Cherokee educational system in the early 1900s. Neely (1991:29) characterizes the BIA-run boarding schools as "dictatorial," as did several of my older Cherokee informants who attended the boarding school on the Qualla Boundary. Students were taught to adopt white cultural attitudes and were severely beaten for speaking Cherokee at any time. A few middle-aged and older informants in my study who did not speak Cherokee indicated to me that their parents, who were fluent in English and Cherokee, chose not to teach their children Cherokee because of their experiences in the boarding schools. Again, all the teachers were white and few of them were from the South, so they also are not expected to have been agents of transmission for monophthongal /ay/.

Snowbird Cherokee attended an all-Indian BIA day school for the elementary grades until 1965 (Neely 1991:31). Snowbird students who wished to attend high school were forced to leave the area to attend boarding schools either on the Qualla Boundary or out of state. Understandably, many older Snowbird residents chose not to attend high school. The Snowbird day school, which was in operation until 1965, was run by two non-local white teachers. Students were allowed to speak Cherokee to each other. Again, we do not expect these teachers to have been /ay/ monophthongizers, and one informant referred to one of these teachers as "the Yankee." In 1954 the boarding school on the Qualla Boundary closed and Snowbird students began attending Graham County's Robinsville High School (Neely 1991:31) where monophthongization for /ay/ would have been the language learning model.

Finally, it is important to consider the different groups of speakers within Snowbird. There are striking differences in terms of frequency of contact with white Graham County residents. I divided the Cherokees in this study into two groups based primarily on interaction frequency with the surrounding white community. Cherokees that fall under the category "low-interaction" are those Cherokees who have had minimal contact with whites. They typically have not worked outside the community or intermarried with whites. Speakers from this group include seven women ranging in age from 37 to 8[illegible] and six men ranging in age from 31 to 94. All of the speakers in this group, except for the one Qualla Boundary woman who is included in this analysis only for preliminary comparative purposes, have maintained regular social networks primarily within the Snowbird Community and have married other Cherokees. All speakers in this group spoke Cherokee as their first language and did not learn English until they attended elementary school.

Cherokees classified as "high-interaction" tend to have more extensive contact with the surrounding white community in their jobs and, in some cases, through marrying monolingual whites. Speakers comprising this group consists of three females, ranging in age from 16 to early 50's, and eleven men ranging in ages from 22 to 83. Three of the men in this group married monolingual white women, and all speakers in this group, with the exception of the sixteen-year-old student, have primarily held jobs which brought them into contact with local whites, such as forest service and wage labor jobs. Additionally, several of the men in this group held jobs, such as welding and boiler-making, that took them out of the region for extensive periods of time. It is important, also, to keep in mind that middle-aged Snowbird speakers in both groups attended high school with their white neighbors after the Snowbird School closed in the mid sixties, and younger speakers attended the public school in Robinsville.

## 4. Monophthongal /ay/ in Appalachian and Cherokee English

Using the preceding sociolinguistic background as a framework, now consider the incidence of /ay/ monophthongization in three speaker groups: low-interaction Cherokee, high-interaction Cherokee, and the external reference group of Appalachian whites. The white external reference group consists of five males and four females ranging in age from 24 to 90. Table 1 gives the raw figures and monophthongization percentages for the three groups by several following phonetic environments: liquid, nasal, voiced obstruent, voiceless obstruent, word boundary + vowel (as in *eye appointment*), word boundary + consonant (as in *lie down*) and utterance final position (as in *Oh, my*).

Table 1 indicates that high-interaction speakers have a significantly higher percentage rate for monophthongization than do low-interaction speakers. In the data under investigation, high-interaction speakers were monophthongal for /ay/ most often in the following environment of liquid, followed by voiceless and voiced obstruents, word boundary + consonant, and nasal. Raw percentages are clearly much lower for monophthongization in the following environments of word boundary + pause and word boundary + vowel.

Low-interaction Cherokee English speakers also participate in the monophthongization of /ay/, but not nearly to the extent of their high-interaction counterparts or white cohorts. Low-interaction Cherokees show the highest incidence of monophthongization with the following environments of voiceless and voiced obstruents, followed by pre-nasal and pre-word boundary + consonant environments.

Appalachian whites are nearly categorical monophthongizers of /ay/. Only one speaker, a forty-seven year-old male, has even slight evidence of diphthongal /ay/, which occurred twice with a following environment of voiceless obstruent. The age range of the speakers in this group (the oldest being ninety) indicates that white speakers in this region have been ungliding in all environments at least since the early part of this century.

The results of a VARBRUL analysis, including both internal and external factor groups, is provided in Table 2.

Internal constraints consist of the following phonetic environments: nasal, voiced and voiceless obstruents, word boundary + consonant, word boundary + vowel, and word boundary + pause. Pre-liquid following environment is not included as a constraint

| | *Liquid* | | *Nasal* | | *Vd. Obst.* | |
|---|---|---|---|---|---|---|
| **Speaker Groups** | a: | ay | a: | ay | a: | ay |
| **Low-Interaction Cherokee English** | 0 | 0 | 35 | 56 | 51 | 50 |
| n=13 | NA | | 38.5 %<br>Monoph. | | 50.5% | |
| **High-Interaction Cherokee English** | 14 | 0 | 37 | 17 | 69 | 20 |
| n=14 | 100 % | | 68.5 % | | 77.5 % | |
| **Appalachian White** | 9 | 0 | 89 | 0 | 90 | 0 |
| n=9 | 100 % | | 100 % | | 100 % | |

**Table 1. Incidence of /ay/ Monophthongization for Three Speaker Groups (continued on the next page).**

| | *Vl. Obst.* | | *Word Bound + Vowel* | | *Word Bound + Con.* | | *Word Bound + Pause* | |
|---|---|---|---|---|---|---|---|---|
| **Speaker Groups** | a: | ay | a: | ay | a: | ay | a: | ay |
| **Low-Interaction Cherokee English** | 98 | 76 | 0 | 27 | 7 | 15 | 0 | 7 |
| n=13 | 56.3 % | | 0 % | | 31.8 % | | 0 % | |
| **High-Interaction Cherokee English** | 170 | 38 | 6 | 18 | 14 | 5 | 6 | 11 |
| n=14 | 81.7 % | | 25.0% | | 73.7 % | | 35.3 % | |
| **Appalachian White** | 122 | 2 | 11 | 0 | 25 | 0 | 21 | 0 |
| n=9 | 98.4 % | | 100 % | | 100 % | | 100 % | |

**Table 1-continued. Incidence of /ay/ Monophthongization for Three Speaker Groups**

because it was thrown out as a knockout constraint in the initial run of VARBRUL. External constraints consist of low-interaction and high-interaction Cherokee English speaker groups.

The data indicates that high-interaction speakers favor monophthongal /ay/ over low-interaction speakers. Results of ANOVA tests, given in Table 3, indicate that the correlation between group affiliation (high-interaction, low-interaction, and white) and monophthongization of /ay/ is statistically significant at the $p<.001$ level.

The VARBRUL weightings indicate that the following environments of voiceless and voiced obstruents most strongly favor monophthongization, followed by nasals and word boundary + consonant. Clearly, the following environments of word

**Table 2. VARBRUL Probabilities**

Input Probability=.60 (Chi-Square/Cell=.334)

**Social Factors:**

Low-Interaction Cherokee=.34 High-Interaction Cherokee=.66

**Linguistic Factors:**

VL Obstruent=.62 VD Obstruent=.56
Nasal=.44 Word Bound. + Con.=.42
Word Bound. + Pause=.13 Word Bound. + Vowel=.07

**Table 3. ANOVA tests of significance of monophthongization of /ay/ and speaker group affiliation**

| **Source** | **Sum of Squares** | **degrees of freedom** | **Mean Square** | **F** |
|---|---|---|---|---|
| **between** | 1.588 | 2 | .794 | 26.47* |
| **within** | 1.006 | 35 | .030 | |
| **total** | 2.594 | | | |

*p<.001

boundary + pause, with VARBRUL weighting of .13, and word boundary + vowel, with VARBRUL weighting of .07, disfavor monophthongization.

What, then, are possible explanations for the patterns suggested by the analysis? The fact that Cherokee English speakers, particularly low-interaction speakers, are not typically monophthongizers of /ay/ in the environment of a following word or syllable boundary followed by either another vowel or a pause is most reasonably attributed to source language interference. As noted earlier, although Cherokee has no clear-cut cases of tautosyllabic vowel-glide sequences such as [ay], combinations of vowel-glide sequences such as [ay[illegible]] do occur. The constraint order for monophthongization in Cherokee English (voiceless obstruent > voiced obstruent > nasal > word boundary + consonant > word boundary + pause > word boundary + vowel) is a reversal of the traditional Southern white pattern and the pattern of pause > voiced obstruent > voiceless obstruent described for Appalachian

English by Wolfram and Christian (1976:64). The constraint order for Cherokee English suggests a disyllabic interpretation at the end of a word boundary when the next word starts with a vowel. In other words, since /y/ is being interpreted as the onset of the next syllable in the source language, it follows that upgliding in the target language is expected to occur most frequently in the environment of word boundary + vowel. Cherokee is a CV language, and this is the expected pattern of interference.

Both Cherokee English speaker groups show evidence of monophthongal [a:], although high-interaction speakers clearly favor monophthongization over low-interaction speakers. One potential explanation for monophthongal [a:] in Cherokee English is source language interference. In Cherokee, [a] is monophthongal except when /a/ is followed by vowels other than /a/ or /i/ in the underlying form (Huff 1977:23). Weinreich (1968) maintains that phonological interference is the result of bilinguals identifying a phoneme in the target language with a phoneme from the source language and then subjecting this phoneme to the phonological rules of the first language when reproducing it in its second language production. More specifically, Romaine (1995:53) notes that this type of interference may result in a process of overdifferentiation, which occurs when speakers transfer phonological distinctions from the source language to sounds in the target language.

Source language interference may play an important role in both monophthongal [a:] and diphthongal [aI]. In this case, speakers show transfer in their English by ungliding, or deleting /i/ when it follows /a/, unless /a/ is followed by a vowel other than /a/ or /i/, in which case it is interpreted as the Cherokee /a/ plus a vowel-glide sequence involving epenthetic [y] and thus is upglided to match the corresponding pattern in the source language. This explanation accounts for both the Cherokee English monophthongization of /ay/ and the upgliding of /ay#/ with a following environment of word boundary + vowel.

Although source language interference can account for both realizations of the variant, monophthongal [a:] and diphthongal [aI], the process of dialect assimilation also surely must play an important role in the monophthongization of /ay/ in Cherokee English. Monophthongal [a:] is a pervasive phenomenon of the mountain white contact community. Since reservation tracts are interspersed with private tracts of land owned by whites, Snowbird Cherokees have had white neighbors since they purchased their lands after the removal. Middle-aged to younger Cherokees attended Graham County public schools, and Cherokees involved in wage-labor industry work with whites. Monophthongization, especially for high-interaction speakers who have a high frequency of contact with whites, could be overt assimilation of the surrounding white dialect norm. The differences between speaker groups in the analysis support this explanation. High-interaction Cherokees have a VARBRUL rating of .66 for monophthongization; low-interaction Cherokees received a VARBRUL weighting at almost half the figure of their high-interaction counterparts. The ANOVA analysis also demonstrates the significance of monophthongization and group affiliation.

Tabulations for the two speakers from Qualla Boundary, a married couple both aged 83 also support the explanation that the participation in monophthongal [aː] may represent overt assimilation to the dialect norms of the white contact community. Both speakers learned Cherokee as their first language and attended the BIA-run boarding school on Qualla Boundary. The woman, categorized as a low-interaction speaker, was a homemaker and thus had little need to interact with whites. However, the man, categorized as a high-interaction speaker, fought in World War I and worked for the park service for many years. He had a much higher incidence of monophthongization than did his wife. Taking into consideration all following phonetic environments, the man realized the variant as monophthongal [aː] in 66 percent of his tokens. His wife, however, realized the variant as monophthongal [aː] in only 16.7 percent of her tokens.

The constraint hierarchies for monophthongization in Cherokee English must also be taken into account in an explanation of the analysis. The constraint hierarchies of Cherokee English do not fall in line with the typical Southern constraint pattern in which prevoiced and prenasal environments favor monophthongization over prevoiceless environments. They are, in fact, reversed in Cherokee English where monophthongization is slightly favored in prevoiceless environments. Research has shown that monophthongal [aː] in prevoiceless environments is spreading throughout the South (Bailey et al. 1996); it is certainly prominent in the white contact community where speakers show near-categorical monophthongization regardless of following environment. Although monophthongal [a:] in Smoky Mountain English is now a general phonetic process, prevoiceless monophthongization is salient socially, particularly to non-Southerners. Perhaps the current contact model of monophthongization in all phonetic environments and the saliency of prevoiceless monophthong-ization have affected the variable levels of Cherokee English speakers who assimilate to the dialect norm of the contact community.

## 5. Conclusion

In her socio-cultural study of the Snowbird Community, anthropologist Sharlotte Neely (1991) describes the Snowbird Cherokee as "persistent", and this term can also be used in a description of the community's linguistic situation. The Snowbird people have always been people of persistence. This is evident in their refusal to be removed on the Trail of Tears in 1830 and in their continued occupation of their ancestral homeland. Since Native Americans could not legally purchase land at that time, they enlisted the help of three local white men who purchased the land for the Cherokees in their own names. This situation is significant because it illustrates what seems to be the primary strategy this community uses to maintain its ancestral language and other characteristics associated with cultural autonomy. Low-frequency Cherokee English speakers' limited interaction with whites is reflected in their limited participation in the monophthongization of /ay/. High-frequency Cherokee English speakers show more assimilation to the contact norm of monophthongal [a:], but even they do not typically display monophthongal [a:] in the linguistic environment where upgliding would be expected in the source language. These patterns suggest a mixed alignment, a combination of source language interference and dialect assimilation working together to affect the variable norms of the community. The linguistic situation of this group is also indicative of Snowbird's ability both to persist in cultural tradition and to be adaptive in their dealings with the significantly larger majority of Graham County's Appalachian white population. What appears at first glance to be an overt assimilative phenomenon, and may even be utilized as such—especially in the case of high-interaction Cherokees—does not preclude substratal effects on source language transfer. Nor does contact-induced language change necessarily reflect language change as it occurred in the contact community. This mixed alignment is one way a group can be both adaptive in regard to pervasive external dialect norms and, at the same time, maintain important cultural and social distinctions.

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# The Phonetic Realization of Final Engma in Taipei Mandarin[1]

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## 1. The Linguistic Situation in Taiwan

Taiwan has been an immigrant society for the past 400 years since Chinese from Hokien and Canton provinces began to immigrate to this island across the South China Sea. They soon outnumbered the aboriginal Austronesian peoples. Since Taiwan is only a small island with limited natural resources, it was gradually transformed into a Chinese-dominant society, where people gradually perceived themselves to be Taiwanese. Owing to its convenient geographical location, it soon attracted the attention of numerous powerful countries. Before 1945 when the Nationalist Party of China took over Taiwan from Japan, Taiwanese people had been ruled by 4 different alien regimes: Spain, the Ming dynasty, the Tsing dynasty and Japan. Then, in 1949, the Nationalist Chinese fled to Taiwan after being defeated by Communist Chinese. They brought along with them their government and their official language. As a result, Mandarin entered the linguistic repertoire of Taiwan, replacing the then official language, Japanese.

In 1945, before the 5th regime took over Taiwan, there were 6 million people in Taiwan (Chen 1979: 18, as quoted by Huang 1993: 20). At least 80% of the population spoke Taiwanese,[2] and 15% spoke Hakka,[3] though Japanese was still the language of the elite. With the Nationalist Chinese came one million Chinese mainlanders (from various provinces, speaking different Chinese languages) who spoke Mandarin as a lingua franca. After 51 years of promotion, Mandarin is now widely spoken. Nowadays, people under the age of 50 should be able to speak Mandarin. However, Taiwanese is still widely used by Taiwanese (and even by most Hakka), especially in domains such as business, family, etc.. The use of minority languages, such as Hakka and the indigenous Austronesian languages, gradually receded over time. A recent estimate of the population structure in Taiwan is as follows: 73.3% Taiwanese, 13% mainlanders, 12% Hakka, 1.7% aborignes (see Huang 1993, chap. 2 for more detailed discussion).

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[1] My thanks goes to Sharon Harris, Alan Lee and Professor G. Sankoff who read an earlier version of this paper. All the remaining errors are my responsibility.

[2] When Chinese first immigrated to Taiwan, they were speaking the Changchou and Chuanchou dialects of Southern Min Chinese, which are mutually intelligible except for minor phonological and lexical differences. Since they have been the dominant population for hundreds of years, and since the somewhat latecomers (Hakka from Canton) were outnumbered, they began to identify themselves as Taiwanese, and called the Southern Min dialect they spoke Taiwanese.

## 2. Taipei Mandarin

As a result of contact with languages in Taiwan (mainly Taiwanese), as well as of the separation from Peking Mandarin for over two decades, the Mandarin which has developed in Taiwan is different from Peking Mandarin, particularly due to the substantial substratum influence of Taiwanese (Kubler 1985, though see footnote 4) as well as to autonomous linguistic drift (as will be shown in this paper). This langauge does not appear homogeneous though. Except for the capital, Taipei, where many people are exposed to a mainly Mandarin-speaking speech community in various domains, most people in other parts of Taiwan learn Mandarin after the age of 6 when they enter elementary school. Mandarin being the only language of education and government, non-native speakers have to master it in order to be competitive in social mobility. For those of the lower social strata, for whom Mandarin is not a native language, mastery of Mandarin is not that essential. A common prejudice is to say that their lower status is the result of having failed to succeed in education, hence having failed to master Mandarin. These people speak a version of Mandarin

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[3] *Hakka* means "guest", a reflection of the fact that they have been moving about several provinces in China throughout history. Alongside these two Chinese languages, there were dozens of Austronesian languages spoken by various tribes of aborigines which constituted 2% of the population.

that has long been referred to as Taiwan Mandarin (as described in Kubler 1985[4]) that is farther away from that spoken by native speakers (especially in Taipei), and this will be referred to as Taipei Mandarin.[5] Taiwan Mandarin, however, can only be regarded as an imperfect L2, as it is only used as a lingua franca when needed and its speakers never reach the level of native-like competence.

Having made this distinction, it should be pointed out that the scope of the data in this paper is Taipei Mandarin spoken in Taiwan.

## 3. Engma Realization

Like all other Chinese languages, Mandarin is a monosyllabic language with a syllable structure as in (1). Initial consonants can be any segment from (2) except /ŋ/. Medial segments can be either /i/, /ü/ or /u/; the nucleus draws from the vowel inventory;[6] vocalic endings can be either /i/ or /u/; consonantal endings can only be /n/ or /ŋ/. All possible rimes are shown in (3). The interest here is on the phonetic realization of final engma in a Taipei Mandarin rime. As will be seen from the data, the actual realization shows variation (ŋ ~ n or ∅) that is conditioned by certain factors.

(1) Mandarin Syllable Structure (Cheng 1973: 11)

<table>
<tr><td colspan="5">tone</td></tr>
<tr><td rowspan="4">initial</td><td colspan="4">final</td></tr>
<tr><td rowspan="3">medial</td><td colspan="3">rime</td></tr>
<tr><td rowspan="2">nucleus</td><td colspan="2">ending</td></tr>
<tr><td>vocalic ending</td><td>consonantal ending</td></tr>
</table>

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[4] It should be pointed out that what Kubler refers to as "Mandarin in Taiwan" should be Taiwan Mandarin.

[5] It should be borne in mind, however, that Taipei Mandarin is not just spoken in Taipei, but in Taiwan in general.

[6] The question of how many phonemic vowels there are in Mandarin is left open here. See Cheng (1973), Lin (1989) and Wang (1993) for proposals of a vowel system of 6, 5 and 2 respectively.

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(2) Consonants of Taipei Mandarin

| | | | | | | |
|---|---|---|---|---|---|---|
| p | p' | m | f | ts | tɕ | tʂ |
| t | t' | n | l | ts' | tɕ' | tʂ' |
| k | k' | ŋ | h | s | ɕ | ʂ |
| | | | | | | ʐ |

(3) Taipei Mandarin rimes

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ɨ | a | ɤ | ai | ei | au | ou | an | ɤn | aŋ | ɤŋ |
| i | ia | ie | iai | | iau | - iou | iɛn | in | iaŋ | iŋ |
| u | ua | uo | uai | uei | | | uan | uɤn | uaŋ | uoŋ |
| ü | | üe | | | | | üɛn | ün | | üoŋ |

As mentioned above, Taipei Mandarin is rich in substratum influences from Taiwanese. Kubler (1985: 93-4) maintains that the absence of syllable final -iŋ and -ɤŋ in Taiwan Mandarin and, by implication, in Taipei Mandarin as well, is among these. This is incorrect, however, for the following reasons. Firstly, Taiwanese does have the -iŋ ending (Cheng & Cheng 1977: chap. 2), and although it does not have -ɤŋ, it has syllabic -ŋ, which, when combining with initial consonants, does have phonetic realizations similar enough to -ɤŋ. Secondly, Taiwanese never has the -ɤn ending; therefore, at least the realization of -ɤŋ or -ɤn in Taipei Mandarin should have nothing to do with Taiwanese phonological structure. Thirdly, as the data in *Hanyu Fangyan Gaiyao* (*Outline of Chinese Dialects*, 2nd. ed. 1983) show, the loss of the -ŋ rime (and a subsequent loss of the -n rime) has been very common among other dialects of Mandarin as well (Chen 1991), suggesting that Taipei Mandarin could be undergoing the same pattern of sound change. Unless evidence suggests otherwise, the variation of final engma in Taipei Mandarin should therefore be considered a stable variable rule, or a potential sound change in progress, independent of Peking Mandarin or Taiwanese influence.

## 4. The Data

One of the contributions of sociolinguistics is the resolution of the perennially vexing question of the implementation of sound change, a question that has bewildered historical linguists for decades. The claim that sound change can be observed is supported by, among other things, the notion of variable rules (Labov 1969), which can be seen as sound change in progress. A classical variable rule that is well studied is the /t,d/ deletion rule in English[7], where the application of the rule is conditioned by all possible, related factors. With the help of a computer analysis program based on probability theory[8] developed by Cedergren and Sankoff in 1972, one can easily estimate from data the probabilistic effects of constraints on the operation of a variable rule.

To realize whether final engma in Taipei Mandarin is implemented as a variable rule, a pilot study was conducted, in which some 300 tokens (i.e., phonetic realizations of engma) were coded from a speaker of Taipei Mandarin.[9] In determining factors that condition rule application, the following 5 factors are considered: preceding vowel, following segment, position in the word, position in the intonational phrase and its tone value. As briefly mentioned in (1), a Mandarin syllable is roughly of the structure: (C)(G)V(G)(N), where G stands for glide and N nasal. Since our interest centers around the nasal ending, the preceding vocalic element and its following segment are the most plausible factors to examine. As can be seen from (3), preceding vowels of engma ending rimes can only be /i, ɤ, o, u/. Following segments can theoretically be either any consonant except for engma, vowels of /ɨ, i, e, ɤ, a, o, u, ü/, or a pause (or filled pause). The 21 initial consonants are grouped into 2 groups: coronal and non-coronal.

Among the 8 potential following vowels, however, /ɨ, e/ would be virtually impossible to come by, since there is only one word (and an exclamation word to boot) in the whole

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[7] See eg. Labov (1967), Labov & Cohen (1967), Labov, Cohen, Robins & Lewis (1968), Wolfram (1969, 1971), Fasold (1972), Guy (1980), etc.

[8] See Cedergren & Sankoff (1974) for discussions of probability theory.

[9] The data are taken from the recoding of an interview I carriedout on March 16, 1996. The informant, HC Wei, is a female MA student at the University of Pennsylvania in her mid 20's who is a bilingual speaker of Taipei Mandarin and Taiwanese. 300 tokens are to be considered a fair size for a relatively accurate input to Cedergren & Sankoff's Goldvarb program.

Mandarin lexicon that begins with /e/, while /ɨ/ has to be preceded by retroflex initials. /i/ is singled out as a factor as opposed to all the other 5 vowels, as suggested by the outcome of the preceding vowel factor group that front vowels (as opposed to back vowels) have a very high percentage of rule application. Of all the other 5 vowels, the most frequent vowels are the back vowels /o, u/. Frequencies of /ɤ, a, ü/ are relatively low, as none of them exceeds 5 in our complete data of 901 tokens. As such, it would be not too misleading to put together all these 5 vowels as a conditioning factor. Position in the word, position in the intonational phrase and tone value are also possible factors, as Mandarin is a tone language with no consonant clusters in the syllable, and thus prosodic considerations could outweigh grammatical ones in cases like this. We therefore have the following 5 factor groups:

(4) Factor Groups

- (i) Preceding vowel: i, ɤ, a, o.
- (ii) Following segment: t(coronal consonant), c(non-coronal consonant), /i/, v(vowel other than /i/), q(pause or filled pause).
- (iii) Position in the word: f(word-final), i(word-internal).
- (iv) Position in the intonational phrase: f(phrase-final), i(phrase-internal).
- (v) Tone value of the syllable: 1 (55), 2 (35), 3 (324), 4 (53).

Having defined the factor groups, we need to give a definition of the variable in question in (5). As should be pointed out, the variation in most cases, where nasal realization is found, lies in the linking of the feature [coronal].

(5) Definition of the variable: the phonetic realization of engma in a Taipei Mandarin rime. In Goldvarb application, 1 represents /ŋ/ realization, while 0 represents /n/ realization, or in a few cases total deletion ∅.

A first run of Goldvarb clearly indicates that engma realization is a variable rule, as it is especially strongly correlated with preceding vowels, with diversified degrees of rule application: ɤ 79%, i 57%, a 11%, o 2%, with a total application of 24%. Encouraged by the result, more tokens (300 from Cheng and 301 from Lin) are coded from two more informants,[10] and similar results are obtained: ɤ 81%, i 70%, a 2%, o 0%, with a total application of 27% for Lin and ɤ 45%, i 45%,a 11%, o 7%, with a total application of 21% for Cheng. Cheng apparently has a slightly different behavior toward this rule,[11] however, the general ordered tendency (i.e., ɤ > i > a > o) for preceding vowel factors with regard to rule application is well supported. Below, the application outcome of the the combined set of data will be discussed.

As Cedergren & Sankoff (1974) demonstrate, the relationship between actual application of a variable rule and the application weight (that is calculated according to the input) is analogous to that of performance and competence. What really counts is therefore the weight that is determined by the input data. (6) shows the results of the variable analysis of our data. Note that since /a/ and /o/ in factor group 1 show relatively low application, these two back vowels are combined.

It appears from (6) that factor group 1, preceding vowel, is the most important factor in deciding the realization of engma. The two non-back vowels /ɤ, i/ strongly favor rule application (i.e., -n realization or total deletion), while the two back vowels /a, o/ disfavor it. Among the factors in factor group 2, coronal consonants and non-conoral ones show a similar (though less acute) pattern as non-back vs. back vowels. The other 3 factors have some fluctuation which might be due to the fact that these three factors have far lower frequencies, suggesting that more than 300 tokens are desirable in cases like this in order to overcome the problem of unbalanced distribution of available data. These together suggest strongly that in a variable rule where the feature [coronal] accounts for the degree of rule application, its constraining factors could be tied to this single feature too.[12]

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[10] Both informants, CL Lin & [illegible]R Cheng, are also female MA students at the University of Pennsylvania who are in their mid-20's. The interview carried out on April [illegible], 1996 & March 26, 1996 respectively. Lin is a native monolingual speaker of Taipei Mandarin, and so is Cheng, except that Cheng, having bilingual parents, has some passive knowledge of Hakka and Taiwanese.

[11] Of her 64 out of 300 applications, 15 involve a total drop of the nasal ending. Specifically, 10 out of 12 applications for factor /a/ belong to this kind of total deletion, which is to some extent quite different from the other two. Whether this behavior is correlated with social factors or any other internal ones awaits more data and further research.

(6) Factor Weight for Rule Application

| Informant | | CR Cheng | CL Lin | HC Wei | Combined |
|---|---|---|---|---|---|
| No.of Tokens | | 300 | 301 | 300 | 901 |
| Group Factor | | Weight | Weight | Weight | Weight |
| 1: | **ɤ** | **0.918** | **0.993** | **0.949** | **0.947** |
| | i | **0.869** | **0.967** | **0.895** | **0.907** |
| | a | 0.254 | 0.107 | 0.275 | 0.231 |
| 2: | **t** | **0.582** | **0.653** | **0.607** | **0.603** |
| | q | 0.570 | 0.462 | 0.504 | 0.553 |
| | i | 0.346 | 0.820 | 0.572 | 0.429 |
| | v | 0.267 | 0.545 | 0.179 | 0.366 |
| | c | 0.342 | 0.088 | 0.325 | 0.267 |
| 3: | f | 0.471 | 0.523 | 0.535 | 0.511 |
| | i | 0.544 | 0.462 | 0.433 | 0.482 |
| 4: | f | 0.769 | 0.480 | 0.529 | 0.622 |
| | i | 0.440 | 0.504 | 0.490 | 0.470 |
| 5: | 4 | 0.685 | 0.568 | 0.509 | 0.607 |
| | 1 | 0.471 | 0.644 | 0.461 | 0.510 |
| | 3 | 0.340 | 0.364 | 0.541 | 0.455 |
| | 2 | 0.315 | 0.388 | 0.482 | 0.371 |

---

[12] Note /ɤ/ has even heavier weight than a coronal vowel /i/. The question of how many phonemic vowels (and what are they?) there are in Mandarin may still be left open, behavior of /ɤ/, however, strongly suggests that it patterns with coronal vowel, and not back vowels, at least in cases like this.

Other than these two immediately neighboring factors, all other prosodic factors (i.e., position in the word, position in the intonational phrase and tone value of the syllable in question) do not seem to correlate significantly with the rule application. Thus the entire outcome appears to suggest that [coronal] is the deciding factor in the application of the variable rule of engma realization in Taipei Mandarin.

## 5. Concluding Remarks

The phonetic realization of final engma in a Taipei Mandarin rime is illuminated by a variable rule analysis. The application of the rule centers around the single feature [coronal], and the results show that significant constraining factors (viz., preceding vowels and following segments) are tied to the feature [coronal] as well, with the ambiguous exception of /ɤ/, which could arguably be related to a coronal vowel /i/. In the preceding vowel factor group, a strongly ordered pattern (ɤ > i > a > o) is found. In the following segment factor group, the fluctuation suggests that more data are needed before a more accurate picture can be delineated. However, coronal consonants always have heavier weight than non-coronal ones, which is another parallel finding. Other factors are not found to be significant, suggesting that in a mono-syllabic language with a predominantly CV structure like Mandarin, fewer factors are involved in sound change. Here, even tone is not playing a role. However, since the data are still limited, this observation should only be suggestive, not final.

The analysis also suggests that more tokens are necessary for a better analysis on factors that have lower frequency from the same informant. Due to practical considerations, social factors (such as age, sex, class, etc.) as well as other possible factors (such as style, speech rate) are not considered here. The three speakers considered here are too similar in social class and educational background to allow us to specualte on the possible effects of social factors. In further work, a consideration of speakers from different age groups may also make possible the assessment of whether engma-variation is a stable, internally-conditioned process, or whether it is in fact a change in progress.

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# Frequency Effects in Variable Lexical Phonology

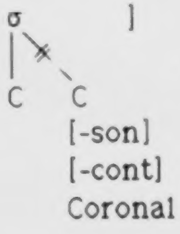
James Myers and Gregory R. Guy

## 1. Variable Lexical Phonology

The variable version of Lexical Phonology developed in Guy 1991, 1992 proposes that variable phonological processes like English Coronal Stop Deletion can apply both postlexically and lexically. Coronal Stop Deletion (CSD), which variably deletes clustered final /t/ or /d/ as represented in Figure 1, is well-known to have different rates of application in various morphological classes of English words. Variable Lexical Phonology explains these differences in terms of the contrasting derivational histories of the classes. Thus the high deletion rate in monomorphemic words like *lift*, where the final stop is underlying, is due to multiple exposures to the deletion rule, both within the lexicon and postlexically. Regular past tense forms like *laughed* only acquire the final cluster targeted by CSD through affixation at the end of the lexicon. Since they are therefore only subject to a postlexical application of the rule, they have low deletion rates.

Figure 1: English Coronal Stop Deletion

<variable, unmarked domain of application>



This model has significant implications for several areas of linguistic theory, and thus should be subject to stringent empirical tests. One of the most important consequences of this model

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is that it predicts an exponential relation among the deletion rates in the various derivational classes; this prediction has been confirmed in several studies (e.g. Guy 1991, 1992, Santa Ana 1991), and some psycholinguistic implications have been tested in Myers (1996). In the present paper, we explore a further set of important predictions involving lexical frequency.

As will shortly become clear, Variable Lexical Phonology predicts that frequency should affect the rate of CSD in the class of Monomorphemic forms but not in the class of Regular past tense forms. Moreover, the model predicts that deletion rates should continue to be strongly affected by morphological class even when frequency is controlled. After we have discussed our data bearing on these predictions, we briefly consider an analysis of CSD in another dialect of English and show how the results found there complement the results of our own study. We will conclude that the results not only provide novel support for the Variable Lexical Phonology model, but also have interesting consequences for psycholinguistic models of morphological processing and for theoretical phonology.

## 2. Frequency Effects

We begin by explaining the basis of our predictions concerning frequency. There is substantial evidence from a number of sources that information about a word's rate of occurrence — its frequency — forms part of a speaker's knowledge of that word. So-called 'frequency effects' are in fact among the best-attested findings in the study of lexical access and retrieval. For example, frequency has been found to be a crucial factor affecting the speed with which words are produced or recognized (classic works include Forster and Chambers 1973, Whaley 1978). Because frequency information is unpredictable, it must be indicated in the lexicon. This means that frequency effects can be used as a diagnostic of lexicality: the existence of frequency effects in the behavior some class of linguistic constituents is an indication that those constituents themselves are stored in the lexicon.

One debate in which frequency effects have played an important role concerns the mental representation and processing of inflection. According to the view taken by Steven Pinker and others, regularly inflected forms, including the regular past tense forms that will be discussed in this paper, are not stored as wholes in the lexicon, but rather are derived from the stems by a regular rule. Thus the regularly inflected word *laughed* is not found in the lexicon; only the stem *laugh* is (as assumed in Variable Lexical Phonology). By contrast, monomorphemic forms like *lift* and irregularly inflected forms like *found* are indeed stored as wholes.

On the other side of the debate are researchers such as Joan Bybee (e.g. Bybee 1995) and others who have maintained that even regularly inflected forms are stored as wholes in the lexicon. There is no past tense 'rule' as such instead, novel inflected forms, as in *Clinton out-Republicaned the Republicans*, are formed by analogy to stored past tense forms.

If frequency effects can be used as a diagnostic of lexicality, these two views make distinct predictions. The claim that regular forms are not stored in the lexicon predicts that only monomorphemic and irregularly inflected forms will show frequency effects. The contrary claim, that regular forms are stored in the lexicon, predicts that they, too, will show frequency effects.

These predictions have been tested repeatedly in the psycholinguistic literature. In one typical experiment reported in Pinker (1991), subjects were shown verb stems on a computer screen and were asked to utter the past tense form as quickly as possible. With irregular verbs, subjects were faster to read high frequency past tense forms than low frequency past tense forms (stem frequencies were of course controlled). However, no frequency effect on the speed of response was found for regular past tense forms. Pinker and colleagues therefore concluded that subjects were deriving these forms on-line, and not retrieving them directly from the mental lexicon, where frequency effects reside.

Two properties of the variable rule of Coronal Stop Deletion suggest that it too can be exploited to address this debate about the processing of inflection. First of course, English happens to indicate regular past tense inflection with the segments, /t/ and /d/, that are subject to this rule. Second, it is known that phonetically-motivated processes, which CSD appears to be, are influenced by lexical frequency. For example, Phillips (1984) found that phonetically-motivated sound changes diffuse through the lexicon from more frequent to less frequent words. Similarly, Fidelholtz (1975)

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found that the phonetically-motivated lexical rule of English vowel reduction applies more readily in higher frequency words like *mistake* than in lower frequency words like *mistook*.

Such frequency effects on variable phonology are essentially the variable analog of the 'lexical exceptions' familiar with invariant lexical rules (see for example Kiparsky 1982). 'Variable exceptionality,' as it might be called, leads to lexically-specific differences in rates of application. In particular, variable lexical rules affect higher frequency words at a higher rate than lower frequency words.

If the Variable Lexical Phonology model is correct, the frequency effect on CSD should therefore depend on the morphological status of the word-final /t/ and /d/. Specifically, we expect that Monomorphemic forms, being stored in the lexicon, will show a robust frequency effect, with higher frequency words like *past* showing a higher rate of deletion than lower frequency words like *priest*. By contrast, Regular past tense forms, being derived and not stored, should show no frequency effect at all: higher frequency words like *passed* and lower frequency words like *kissed* should show equal rates of deletion.

## 3. Methods

These predictions were tested on recordings of the conversational speech of two working-class informants in Philadelphia, one male and one female (approximately 75% of the tokens came from the female speaker). Tokens of words ending in /t/- or /d/-final clusters were coded as deleted if trained listeners could not hear any evidence of the stop; they were coded as retained if the stop had any audible reflex, including a glottal stop or an affricate derived from a stop-glide sequence. Tokens were also coded for phonetic environments: pre-consonantal, pre-vocalic, or pre-pausal. Finally, tokens were coded for morphological class: Regular past; Monomorphemic, which included strong past tense forms like *found*; and Semiweak past. The Semiweak class consisted of those irregular past tense forms that involve a suffix, such as *left* (past tense of *leave*; the adjective *left* was included in the Monomorphemic class).

As is standard in studies of CSD, certain words with very high frequencies that are known to have inordinately high deletion rates were removed from the data set. These removed words were *and* and all words with the contraction *-n't* (following the practice of Guy 1991, 1992), as well as the words *just* and *went* (following Bybee 1996). In addition, all instances of the words *used* and *supposed* were removed, as these virtually always appeared in the lexicalized phrases *used to* and *supposed to*.

Because we were using the standard frequency counts of Kucera and Francis (1967), certain other tokens had to be removed as well. These included 12 instances of local proper names, such as *Lakehurst*, which have a frequency of 0 in the standard reference but were clearly of higher frequency in Philadelphia; nonlocal names, such as *Maryland*, were not removed. Also removed were all 17 compounds, such as *boyfriend*; the frequency of *boyfriend* is much lower than that of *friend*, and it was not clear which should be used in our analysis. The data set that remained after these adjustments contained a total of 1080 tokens. The class of Semi-weak forms was unfortunately too small to examine the effect of frequency (40 tokens of 5 types) and will not be discussed further.

Word frequency in Kucera and Francis (1967) is given as an integer representing the number of instances of that word in a corpus of one million words. Their original corpus was compiled from a variety of written material, including newspapers and novels, and although it may therefore not be ideal for the study of spoken language, it remains the largest and most widely used such corpus available. A computerized version of this corpus in the laboratory of Paul Luce at the State University of New York at Buffalo was used to determine lexical frequencies for all the words in our data set, ranging from 0 for *cheapest* and *bussed* to 1360 for *first* and 401 for *called*.

A cut-off point of 35 was used to classify tokens by frequency: tokens with a frequency equal to or below 35 were classified as low frequency and tokens with a frequency above 35 were classified as high frequency. This cut-off point was chosen to follow the procedure of Bybee (1996), who, as we will see, argues that regular forms are not derived on-line. Bybee motivates the choice herself by the fact that a frequency of 35 divides the set of past tense forms in the Kucera and Francis frequency list exactly in half. In Bybee's data set as well as ours, this criterion puts approximately 20% of the tokens into the low frequency class and 80% into the high frequency class.

## 4. Results

The basic data are shown in Table 1.

Table 1: Variable Coronal Stop Deletion (Philadelphia)

| Monomorphemic* | Total | Deletions | Deletion % |
|---|---|---|---|
| Low frequency | 151 | 28 | 18.5 |
| High frequency | 573 | 194 | 33.9 |

| Regular** | Total | Deletions | Deletion % |
|---|---|---|---|
| Low frequency | 96 | 7 | 7.3 |
| High frequency | 220 | 18 | 8.2 |

$^{*}\chi^2(1) = 13.182,\ p < .01$
$^{**}\chi^2(1) = .073,\ p > .1$

A chi-square on the Monomorphemic class finds a significant effect of frequency on deletion rates, while a chi-square on the Regular class finds no such effect. An ANOVA finds significant effects for both morphology and frequency. The interaction between frequency and morphology is significant as well, which further supports the conclusion that frequency affects the Monomorphemic and Regular classes differently.

The fact that both morphology and frequency affect CSD independently is worth emphasizing. This is because an alternative explanation of the higher rates of deletion that have been found in Monomorphemic forms is that this is merely a frequency effect, since Monomorphemic forms tend to be of higher frequency than Regular past tense forms. For example, a chi-square on the above totals finds that the Monomorphemic class has a significantly higher proportion of high frequency tokens than the Regular class.

This frequency confound can be reduced by removing tokens in the Monomorphemic class that have frequencies above the highest frequency found in the Regular class. Doing this to our data set yields the results in the Table 2. The highest frequency in this frequency-capped Monomorphemic class is 399, very close to the highest frequency of 401 found in the Regular class.

Table 2: Frequency-balanced data sets

Monomorphemic* (max frequency = 399)

| | Total | Deletions | Deletion % |
|---|---|---|---|
| Low frequency | 151 | 28 | 18.5 |
| High frequency | 332 | 98 | 29.5 |

Regular (repeated from last table; max frequency = 401)

| | Total | Deletions | Deletion % |
|---|---|---|---|
| Low frequency | 96 | 7 | 7.3 |
| High frequency | 220 | 18 | 8.2 |

*$\chi^2(1) = 6.484, p < .025$

A chi-square test now finds no difference in low and high frequency ratios between the Regular class and the frequency-capped Monomorphemic class. An ANOVA still finds an overall effect of frequency on deletion, but only marginal significance (p=.0469). By contrast, the effect of morphology alone on deletion rates remains highly significant (p<.0001). Even more interesting, a chi-square on the frequency-capped Monomorphemic class still shows an effect of frequency, with TSD applying significantly more often in high frequency forms. In other words, even when the overall data set is controlled for frequency, frequency affects deletion rates within the Monomorphemic class but not within the Regular class.

## 4.1. Exponential Effects

It is reasonable to ask an even more challenging question: Is an exponential relation still found in this frequency-controlled data set? Recall that Guy (1991) claimed that in the Variable Lexical Phonology model, Monomorphemic forms, which end in /t/ or /d/ underlyingly, have three chances to undergo variable deletion, twice lexically and once postlexically, while Regular forms have only one chance, namely postlexically. This is illustrated in Figure 2, where there are three pathways to surface deletion for the Monomorphs, two for Semiweaks, and just one for Regular pasts. If the probability that /t/ or /d/ will be retained is the same at each level -- call this p(r) -- and if the process operates independently at each level, we predict that the retention rate in Regular past forms will be p(r), while the retention rate in Monomorphemic forms will be the cube of p(r). This cubed retention rate in the Monomorphemic class will not merely be smaller than that found in the Regular class (because p(r) is less than 1), but smaller by a specific, statistically testable degree.

Figure 2: An exponential model of Coronal Stop Deletion
(after Guy 1991, 1992)

```
       Monomorphs       Semiweak            Regular
 ex.:     lift             left              laughed

          /ft/             /v/                 /f/
 L1       /  \              |                   |
         ft    f            v                   f
 ------------------------------------------------------
         ft      f         f+t                  f
 L2     / \      |         /  \                 |
       ft  f     f        ft    f               f
 ======================================================
       ft    f   f        ft    f              f#t
 PL   / \    |   |        / \   |              / \
     ft  f   f   f       ft  f  f             ft   f
```

In Table 3 we can see that the cube root of the observed retention rate for Monomorphemic forms is extremely close to the observed retention rate for Regular forms. This observation can be given statistical validity by comparing these observed rates with those expected given an estimated value for p(r). The simplest way to estimate p(r) is to use the surface retention rate for the Regular class, 92.1%. A chi-square test finds no significant difference between the actual surface retention rates for the Monomorphemic and Regular classes and those that are predicted given this p(r) value. In other words, the exponential pattern is found even in the frequency-controlled data set, and therefore this pattern cannot be due to a frequency effect alone.

Table 3: Test of exponential hypothesis with frequency-balanced data sets

| | Total | Retentions | Ret.% | Est. $p_r$ |
|---|---|---|---|---|
| Mono | 438 | 357 | 81.5 | 93.4* |
| Reg | 316 | 291 | 92.1 | 92.1 |

*cube root of surface rate

## 4.2. CSD in Bybee 1996

The general observation we have reported here, that the Monomorphemic class shows a frequency effect in deletion rates while the Regular class does not, is precisely what is predicted by Variable Lexical Phonology, and supports the hypothesis that regularly inflected forms are NOT stored in the lexicon. However, Joan Bybee (1996), in an examination of Coronal Stop Deletion in the corpus of Los Angeles Chicano English collected by Otto Santa Ana (Santa Ana 1991) reports a frequency effect in Regular past tense forms. Bybee's data for Regular forms are presented in Table 4. A chi-square test does indicate a significant effect of frequency on the deletion rate.

Table 4: Coronal Stop Deletion in Los Angeles Chicano English (analysis by Bybee 1996)

| Regular (non-prevocalic tokens only) | Total | Deletions | Deletion % |
|---|---|---|---|
| Low frequency | 58 | 11 | 18.9 |
| High frequency | 111 | 44 | 39.6 |

There are two major ways in which the data presented by Bybee differ from ours. First, the deletion rates in the dialect she examined are much higher than in the dialect we examined. Second, she restricted her examination to Regular tokens in non-prevocalic environments, that is, before consonants and pauses. This was done because these environments tend to favor deletion. We have no way to adjust the base deletion rate of the dialect we studied, but we too can boost deletion rates in our data set by following Bybee and including only tokens in non-prevocalic environments. These data are shown here. Again, however, there is no effect of frequency.

Table 5: Coronal Stop Deletion in Philadelphia in restricted phonological environments

Regular (non-prevocalic tokens only)

| | Total | Deletions | Deletion % |
|---|---|---|---|
| Low frequency | 73 | 7 | 9.6 |
| High frequency | 135 | 13 | 9.6 |

The fact that Bybee finds a frequency effect in Regular forms only in a dialect with an extremely high base deletion rate, and then apparently only in environments that boost deletion rates still higher, suggests that at the very least, the effect of frequency on Regular forms is not very strong. But does Bybee's finding threaten the claim made by us, Pinker and others that regularly inflected forms are not stored in the lexicon? It does, but only if one attempts to maintain the extreme position that Regular forms are *always* derived on-line. Such a position is untenable for independent reasons, however. Among other things, regularly inflected forms can come to take on unpredictable and therefore lexicalized aspects over time, which would be impossible if regular forms were never stored in memory. For example, speakers must remember that the regularly inflected plural form *glasses* describes a singular object. Similarly, the regular past tense forms in *used to* and *supposed to* now display irregular phonology. There is even evidence that an important factor in the lexicalization of regularly inflected forms is lexical frequency. For instance, Stemberger and MacWhinney (1988) found that in both naturally occurring and experimentally-induced speech errors, inflections on regular forms are less likely to be shifted or exchanged if the forms are of high frequency. Regardless of their interest, however, such results do not negate our assumption that the on-line generation of regularly inflected forms is the default case.

## 5. Theoretical Implications

Thus far we have focussed primarily on the implications of our findings for the Variable Lexical Phonology model and for models of language production, but there are general implications for phonological theory that should be addressed as well. The theory of Lexical Phonology, upon which Variable Lexical Phonology is built, has lost considerable favor in the phonological climate of the mid-1990s, partly because its rule-driven formalism of level-ordering is incompatible with the currently fashionable paradigm of Optimality Theory (Prince and Smolensky 1993). As Kiparsky (1993) has shown, the exponential effect in CSD discovered by Guy (1991) can be modelled in Optimality Theory if one makes two fundamental assumptions. First, the presence or absence of /t/ and /d/ in different morphological classes is determined by independent well-formedness constraints, rather than by a single rule operating at different levels. Second, the ranking of these constraints is chosen randomly whenever a /t/-final or /d/-final form is uttered. It is easy to demonstrate, which we will not do here, that this scheme can be made to give rise to the exponential effect without the use of rules or level ordering.

However, one thing that this analysis cannot describe is the set of striking differences between the lexical and postlexical applications of Coronal Stop Deletion. Guy (1992) and Myers (1996) discuss some such differences, and the present paper reveals another: lexical applications are sensitive to frequency, while postlexical applications are not. While frequency effects on lexical rule application are easy to conceptualize within the framework of Lexical Phonology as a form of 'variable exceptionality,' as noted earlier, it is yet unclear how Optimality Theory can capture the lexical versus postlexical distinction without stipulation.

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Turning back to our own research, a crucial question remains unanswered. While the present project has produced results that are quite consistent with work by Pinker and his colleagues, the exponential effect which inspired it is not. Pinker expects only two morphologically relevant classes: Monomorphemic forms, which are stored, and Regular forms, which are derived. However, Guy and Boyd (1990) and Guy (1991) were able to show that the Semiweak past tense forms behave as a distinct third class in their effect on Coronal Stop Deletion. Bybee (1996) suggests that the high rate of deletion in this class is due solely to high frequency, but this seems unlikely. The mean frequencies for the Monomorphemic and Semiweak classes in our data are virtually identical (360 versus 338), suggesting that if these classes behave distinctly, it is apparently not because of frequency. A much larger corpus of natural speech, one that includes a large number of Semiweak forms, both types and tokens, would be needed to determined how Semiweak forms are processed in speech production: by rule, analogy, or some combination of these.

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# Variation in the Nativization of Foreign [a] in English

Charles Boberg

## 1. Introduction

Different languages involve different sets of sounds selected from the universe of possible human speech sounds. When speakers of one language borrow words from another, they have to adapt the sounds contained in the foreign words to sounds used in their own language, a process I refer to as nativization.[1] While the ways in which English speakers nativize foreign words are full of complexities and irregular developments, one of the most puzzling is the treatment of words containing the foreign vowel [a], written with the letter <a> in the source languages (e.g., French *façade*, German *angst*, Spanish *plaza*) or in romanizations of the source languages (e.g., Russian *Pravda*, Japanese *origami*).

Owing to a series of sound changes that occurred at earlier periods in the history of English,[2] the English letter <a> typically represents not the low-central vowel [a], as in the orthography of most of the languages from which English borrows, but either the low-front "short-a" of *cat* (/æ/) or the tense, mid-front "long-a" of *gate* (/ey/).[3] A low-central vowel similar to

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[1] Bloomfield (1933:445) calls this process "phonetic substitution", Weinreich (1968:14) calls it "phonic interference". Van Coetsem (1988) calls it "adaptation" and contrasts it with "imitation". In "adaptation", speakers assign a foreign phone to a native phoneme; in "imitation" they use the foreign phone, stepping outside the phonetic bounds of their native phoneme system. All of the nativization strategies shown in Table 1 are clearly examples of adaptation rather than imitation.

[2] ME /a:/ ("long-a") regularly became ModE /ey/ by the "Great Vowel Shift", a change which Prins (1972) says was more or less complete by the end of the 17th century. ME /a/ ("short-a") regularly became ModE /æ/ by fronting, which Prins says happened by the 16th century. See Prins 1972, pp. 122-23.

[3] Throughout this paper, I follow the convention that phonologically unanalyzed sounds, or phones, are represented in square brackets with

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the foreign vowel [a] does occur in some English dialects, however. In Southern British English[4] (henceforth BrE), or in traditional Boston speech, it is most commonly found either in the "broad-a" class (words like *past* and *dance*)[5] or before a following vocalized /r/[6] in words like *car* and *cart*; these will be represented here as the phoneme /ah/, the same as is found in BrE *father*. In many American English (henceforth AmE) dialects,[7] [a] or something close to it can be heard as the phonetic realization of the "short-o" (/o/) of *got* or *stop*.

It should be noted at this point that when a word like *llama* is nativized in AmE with the sound [a], some phonologists might choose to assign this vowel to the phoneme found in *father* and a handful of other native words,[8] rather than to the

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IPA symbols -- [a], while the phonemes (and, by extension, the word classes) of a particular language or dialect are identified by slashes -- /æ/, /ey/, *etc*. The latter representations are to be thought of as symbols for historically continuous English phonemes or word classes, based on the notational system developed in Trager and Smith (1951) and adopted throughout the subsequent work of Labov; they are not to be taken as phonetically precise IPA transcriptions.

[4] And, by extension, in Australian and New Zealand English.

[5] The "broad-a" class came mostly from ME /a/, which lengthened and backed in Southern BrE in the 18th century. This happened most generally to ME stressed /a/ before voiceless fricatives or fricative-stop clusters *(path, past)* or occasionally, to an originally long vowel before nasal-obstruent clusters in French borrowings (*France, dance, grant, command*); see Prins 1972:145.

[6] Prins (1972:229) says non-prevocalic /r/ was vocalized in Southern BrE in the 18th century. The vocalization results in [aː], a sound identical to that of the broad-a class. The modern phoneme /ah/ of Southern BrE is derived from both sources.

[7] Generally in those dialects where /o/ (*cot*) has remained distinct from /oh/ (*caught*), and especially in the major cities of the Middle Atlantic and Great Lakes regions (New York, Philadelphia and Baltimore; and Rochester, Buffalo, Cleveland, Detroit, Chicago and Milwaukee).

[8] In AmE, these are: 4 words in <-lm>, *alms, balm, calm* and *palm*; the pair *ma* and *pa*; and a few interjections, like *aha!* and *la-di-da!*. In BrE, *rather* is like *father* and *lather* can have /ah/ or /æ/. Amounting to no more than a dozen words and showing strong phonological conditioning, the *father*-class clearly has marginal status within the modern AmE

short-o of ***got***, making it, as in BrE, a long, instead of a short vowel. However, for a large majority of AmE speakers,[9] the small ***father***-class and the short-o class of ***bother*** are either identical in pronunciation or kept apart by length alone, which is not sufficient to maintain a wholly functional distinction between English vowels.[10] Indeed, Merriam-Webster's ***Webster's Collegiate Dictionary, Tenth Edition*** (1993; henceforth ***Webster's Dictionary***) transcribes all words like *llama* with short-o, so that ***pasta***, spelled with <a>, and ***possible***, spelled with <o>, have the same stressed vowel,[11] Because /o/ is by far the larger class, the class created in AmE by the merger of /o/ and the relics of /ah/ will be represented here as AmE /o/.

The availability of vowels that sound more like a foreign [a] than English /æ/ or /ey/ gives English speakers a choice. When they nativize foreign words containing the letter <a>, they have to decide whether to go by the spelling and assign the foreign vowel to English short- or long-a, or to go by the sound, in which case British speakers assign it to broad-a – /ah/ – and Americans to short-o – /o/. A word like ***apparatus***, then, could emerge from nativization as /æpə'rætəs/, with a short-a, /æpə'reytəs/, with a long-a, or, in some dialects,[12]

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vowel system. In BrE, by contrast, it is phonetically identical with broad-a and /ar/, so that it is part of the phoneme /ah/.

[9] Certainly not the case for BrE, where the /ah/ of ***father*** and the /o/ of ***bother*** are clearly distinct in both quantity and quality, the latter vowel not having descended, unrounded and fronted as in AmE.

[10] Labov (1973:30) argues that phonemic distinctions between English vowels normally need to be based on at least two distinctive features. In the Northern New Jersey dialect he studied, the ***balm-bomb*** contrast represented a marginal distinction because it depended on length alone.

[11] ***Webster's Collegiate Dictionary***, 10th ed. (1993). While foreign [a] words with a non-front vowel are all transcribed with /o/ (the ***Webster's*** symbol is <ä>), the ***father***-class words are given with either /o/ or /ah/. A note in the Guide to Pronunciation (p. 33a) explains that ***father*** and ***bother*** may be kept apart by length alone in New York City and the Southeastern U.S., or by both length and advancement in New England. Eastern New England, at least historically, follows BrE rather than the rest of AmE with respect both to the membership of the /ah/ class and to the clear distinction between /ah/ and /o/.

[12] ***Apparatus*** and ***data*** can have /ah/ in Australian and New Zealand English. ***Webster's*** gives /o/ as a possible variant for ***data*** in AmE as well.

/æpə 'rahtə s/, with a broad-a or short-o. The operation of these different nativization strategies in different dialects over the centuries has produced a large amount of variation – diachronic, geographic, social and lexical – in the way foreign [a] is realized in English. Table 1 illustrates some of this variation, as instantiated in two major national dialects: "standard" AmE, as represented in *Webster's Dictionary*, and "standard" Southern BrE, as represented in the *Oxford Concise English Dictionary*, the 9th edition of 1995 (henceforth the *OED*).

Of the nine possible combinations that arise from three strategies in two dialects, seven are well instantiated. In addition to the geographic variation between BrE and AmE portrayed in this table, we can observe apparent diachronic variation in the difference between *tornado*, borrowed from Spanish in 1556, and *aficionado*, borrowed from Spanish in 1845, or between *volcano*, borrowed from Italian in 1613, and *romano*, borrowed from Italian in 1908: both pairs contain identical phonological environments but are separated by several centuries in age. Random lexical variation seems the only way to explain a pair like *pasta*, from 1874, and *canasta*, from 1948, in AmE, or, in BrE, *tomato*, from 1604, and *potato*, from 1565. Finally, while this table only shows words for which the dictionaries give invariant pronunciations, there are many words whose pronunciations are not fixed in either dialect. For example, *Pakistani*, *panorama*, *plaza* and *pistachio* can be said with either /æ/ or /o/ in AmE. A few words, like *Amish*, *caveat*, *errata* and *gala*, can be realized with all three vowels: /gælə/, /geylə/ and /golə/ are all possible in AmE. On the surface, this situation looks chaotic. In fact, much of the variation may be predictable in terms of general conditions governing foreign [a] assignment in each dialect, which it is the purpose of this paper to uncover.

In order to study variation in the nativization of foreign [a], a database of hundreds of words containing the variable was compiled, with the pronunciations prescribed for AmE and BrE[13] by *Webster's* and the *OED*, as well as the source language and

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[13] The analysis was limited by necessity to these dialects, as dictionary data for other dialects was not available at the time of writing. Furthermore, the quantity of data required made elicitation from native speakers impractical.

**Table 1**: *British and American examples of different nativization outcomes* (acc. to ***Webster's*** and the *OED*).

| | BrE /ey/ | BrE /æ/ | BrE /ah/ |
|---|---|---|---|
| AmE /ey/ | nabob<br>nadir<br>**potato**<br>ratio<br>**tornado**<br>**volcano** | basalt<br>phalanx | **tomato**<br>vase |
| AmE /æ/ | (rare) | caftan<br>**canasta**<br>cravat<br>tobacco<br>verandah | banana<br>morale<br>sultana |
| AmE /o/ | (rare) | dachshund<br>focaccia<br>macho<br>mantra<br>paparazzo<br>**pasta**<br>Ramadan<br>shiatsu | **aficionado**<br>bra<br>enchilada<br>falafel<br>karate<br>lager<br>nirvana<br>origami<br>**romano**<br>salami<br>souvlaki<br>Sumatra<br>Yugoslavian |

the date of entry of each word into English.[14] The database contains over 200 words which have been nativized in AmE as /o/, going against the default identification of the English letter <a> with /æ/ or /ey/; another 250 show variation in AmE; and almost 200 show BrE-AmE differences. The question of foreign [a] nativization, then, concerns not a few words but hundreds or thousands, many of them in daily usage,[15] including innumerable foreign names that do not appear in dictionaries. Foreign [a] represents one of the most significant sources of variation in the English lexicon and an unsettled and hitherto unexplored domain of English phonology. This paper will present the results of a multivariate (Varbrul) analysis designed to determine the relative weight of a set of phonological and non-phonological factors in predicting the assignment of foreign [a] to one English vowel or another in AmE and BrE.

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[14] Source and date of entry were taken from ***Webster's***, the *Oxford Concise* does not give date of entry.

[15] In this connection consider especially: food items like nachos, pasta and taco; commercial names like Armani, Mazda, Saab and Yamaha;

## 2. Method

The first step in the analysis was to tabulate an average date of entry into English for each dependent variable in each dialect. The results are shown in Table 2. An examination of this table suggests that the evidence for diachronic variation apparent in Table 1 was part of a larger pattern. Foreign [a] words nativized as /ey/ are on average the oldest, while those nativized with /o/ are the most recent, with /æ/ in the middle. Between the /æ/ and /o/ periods in AmE there is variation between the two vowels, which suggests a transition from one to the other. The BrE dates do not display quite the same linearity but the general picture is the same.[16]

**Table 2**: *Average date of entry into English for American and British nativizations of foreign [a].* (Dates given by *Webster's Dictionary*.)

| | AmE | | BrE | |
|---|---|---|---|---|
| [a] NATIVIZED AS: | DATE | n | DATE | n |
| /ey/ (*potato*) | 1662 | 37 | 1662 | 35 |
| /æ/ (*tobacco*) | 1700 | 172 | 1727 | 258 |
| var. {/æ/, /o,ah/} (*Iraq*) | 1784 | 74 | 1813 | 28 |
| BrE /ah/, AmE /o/ (*lager*) | 1810 | 131 | 1794 | 139 |

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personal names like Yasser Arafat and Giuliani; and place names like Amman, Hamburg, Milan, Osaka and Yugoslavia (or indeed Chicago!).

[16] The difference in linearity between AmE and BrE will be shown to be important in the discussion that follows.

Two aspects of these data should be kept in mind. First, the inclusion of words in the database was not random, so that the results in this table may have been affected by a bias in the sample. Second, the pattern that is evident may not represent a change in nativization strategy over time so much as the effect over time of gradual nativization, whereby a word first enters the language with its foreign [a] phonetically intact, but is later assigned to short or long-a when it has been in use for a century or more.

Nevertheless, these data support the observation that foreign [a] nativization today is mainly a choice between /æ/ and /ah,o/. This observation can be verified by testing it out on a few recent loans. For instance, *Vaclav Havel*, the Czech leader, could be either /hævəl/ or /hahvəl/ in ModE, but not /heyvəl/; *enchiladas* could be /entʃə'lædəz/ or /entʃə'lahdəz/ but not /entʃə'leydəz/. If we had borrowed *tacos* in the Middle Ages, then, they would probably be /teykowz/ today; if we borrowed *potatoes* today, they would probably be /pə'tahtowz/. In light of this observation, the analysis was simplified by examining only the choice between /æ/ and /o,ah/, ignoring for purposes of this paper the choice of /ey/.[17] This simplification resulted in a dependent variable that could be characterized in essentially binary terms and thereby satisfy the criteria for Varbrul analysis.[18]

While our quick examination of the effect of date of entry on nativization was suggestive, it could not be conclusive, not only for the reasons already stated, but also because the tabular results may be skewed by dependence or interaction in the data. In order to test the effect of date of entry more reliably, as well as to investigate variation not explained by date of entry, a Varbrul analysis of the data collected from dictionaries was carried out, using the GoldVarb program.[19] A separate analysis for each dialect was conducted, so that the results could be compared and any differences in nativization patterns between AmE and BrE identified.

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[17] Words spelled with <a> in the /ey/ class generally got there by means of the Great Vowel Shift, rather than by nativization; in other words, they are medieval or Renaissance borrowings that would have had ME or EModE /a:/. By contrast, nativization with /æ/ is still a productive process today.

[18] The version of Varbrul used, GoldVarb 1.6, cannot deal with trinomial dependent variables.

The dependent variable in the Varbrul analysis was the choice between two nativization outcomes: /æ/, coded as 'æ', and either BrE /ah/ or AmE /o/, coded as 'a'. A third possibility was 'v', or variation between 'æ' and 'a', but this was always combined with one or the other of the invariant choices, so that when the application value was 'æ', both 'v' and 'a' were non-applications, and when the application value was 'a', both 'v' and 'æ' were non-applications. This has the effect of looking at 'æ' as an outcome against the possibility of 'a', or at 'a' against the possibility of 'æ'. Words in the database that were characterized by any dependent variable value other than 'a', 'æ' or 'v' (a,æ) were excluded from the analysis. The analysis was also limited to words for which both *Webster's* and *OED* data were available, so that the AmE and BrE analyses would be based on an identical corpus and therefore directly comparable. These criteria allowed for the inclusion of 436 tokens.

Eleven explanatory variables were examined, shown in Table 3 with the factors that make up each group. The factor groups were: place of the following consonant (labial, coronal, velar or not applicable); manner of the following consonant (stop or affricate, fricative, nasal, /l/, /r/,[20] glide or pause); manner of the preceding consonant (/w/, /l/, pause or other); coda type (no coda (vowel in final position), coda present (following consonant must be a coda) or ambisyllabic (following consonant could be either coda or onset)); stress (primary or secondary); potential harmony (presence of other tokens of foreign [a] in the word or phrase); spelling of the foreign [a] (<ah, aa or a>); accompanying orthographic foreignness (presence of foreign diacritics or non-English letter sequences); source language or language group from which the word was borrowed; date of entry into English (quantized into five periods, corresponding to medieval, renaissance or early modern, 19th century, early 20th century and post-World War II loans); and semantic field (a set of semantic or connotational areas that had been frequently observed in the data, such as food items, terms from the arts or place names).[21]

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[19] GoldVarb Version 1.6, "A Variable Rule Application for the Macintosh", was written by David Rand and David Sankoff of the Centre de recherches mathématiques at the Université de Montréal (1988).

[20] The database excludes words in which a following /r/ is not intervocalic, since a final or pre-consonantal /r/ will categorically produce /ah/ in all English dialects: English phonotactics prohibit [æ] before coda /r/. Before intervocalic /r/, by contrast, all variants are possible: *scenario* can have any one of /ey/, /æ/ or /ah/ in at least one dialect.

**Table 3:** *Factor Groups established for Varbrul Analysis* (initial scheme).

| GROUP | FACTOR | DESCRIPTION |
|---|---|---|
| 1. Following place | l | labial |
| | c | coronal |
| | v | velar |
| | n | not applicable (no foll. C) |
| 2. Following manner | s | stop or affricate |
| | f | fricative |
| | n | nasal |
| | l | /l/ |
| | r | /r/ |
| | g | glide (/y, w/) |
| | p | pause |
| 3. Preceding manner | w | /w/ |
| | l | /l/ |
| | p | pause (word-initial) |
| | o | other (C other than /w, l/) |
| 4. Coda type | f | final (no possible coda: vowel in final position) |
| | c | coda/closed (following C must be coda) |
| | a | ambisyllabic/open (following C could be onset) |

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[21] Assignment to semantic fields was done at my discretion and may have been somewhat arbitrary in some cases. Several tokens, for instance, fit more than one category: *Rachmaninov* could be an arts term or a personal name; *sari* could be a concrete object or a non-food cultural term. In the absence of any external standard to refer to, I tried to be as consistent as possible.

| | | |
|---|---|---|
| 5. Stress | 1<br>2 | primary (e.g. *RachMANinov*)<br>sec. (e.g. *RACHmaninov*) |
| 6. Potential harmony | 2<br>1<br>0 | another [a] in the word (e.g. *extravaganza*)<br>another [a] in the phrase (e.g. *tabula rasa*)<br>no other [a] (e.g. *modus operandi*) |
| 7. Spelling | h<br>2<br>a | <ah> (e.g. *brahmin*)<br><aa> (e.g. *Saab*)<br><a> (e.g. *pasta*) |
| 8. Accomp. orthographic foreignness | 2<br>1<br>0 | foreign diacritics (e.g. *façade, blasé, jalapeño*)<br>foreign sequence (e.g. *llama, ersatz, kvass*)<br>no obvious foreignness (e.g. *lager, morale, nan*) |
| 9. Source language | a<br>f<br>g<br>h<br>i<br>j<br>l<br>r<br>s<br>t<br>y<br>o | Arabic<br>French<br>Germanic (Ger., Du. or Scand.)<br>Hindi, Sanskrit or Persian<br>Italian<br>Japanese<br>Latin or Classical Greek<br>Russian or other Slavic<br>Spanish or Portuguese<br>Turkish and other Turkic<br>Yiddish or Hebrew<br>Other (e.g., African, Chinese, Native American) |
| 10. Date of entry into English | 1<br>2<br>3<br>4<br>5 | Before 1500 (Medieval)<br>1500-1799 (Renaissance-Early Modern period)<br>1800-1899 (19th century)<br>1900-1945 (early 20th century)<br>1946-present (post-war; recent) |
| 11. Semantic Field | a<br>c<br>f | arts (e.g. *Caravaggio, drama, sonata*)<br>non-food cultural term (e.g. *origami, plaza, sari*)<br>food item (e.g. *cilantro, brat-* |

| | | |
|---|---|---|
| | | *wurst, souvlaki*) |
| | i | idea, concept (e.g. *éclat, glasnost, Schadenfreude*) |
| | n | personal name (e.g. *Mugabe, Nasser, Stalin*) |
| | p | place or national name (e.g. *Baghdad, Kazakh, Navajo*) |
| | r | religious term (e.g. *Hanukkah, imam, mantra*) |
| | x | concrete object (e.g. *lava, llama, tsunami*) |
| | o | other |

All of the groups should be self-explanatory, with the possible exception of # 4, 'coda type'. In this group, I was not willing to tackle the problem of distinguishing true open syllables, in which the following consonant syllabifies as the onset of the following syllable, from syllables with ambisyllabic codas, in which the following consonant both closes the syllable containing the foreign [a] and acts as the onset of the following syllable.[22] While the foreign [a] in a word like *bra* is obviously in an open syllable by virtue of being in final position, and that in a word like *mantra* is equally obviously in a closed syllable because /ntr/ is not a possible English onset, a word like *pasta*, which regularly has /æ/ in BrE, is much more problematic: /'pæ.stə/ and /'pæs.tə/ are both possible syllabifications, the first an open and the second a closed syllable. Phonological theory seems divided on how to treat these cases: a constraint against short vowels in stressed open syllables would rule out the first syllabification; but a maximal onset requirement would rule out the second, since /st/ is a possible Engish onset. An appeal to ambisyllabicity appears to reconcile these conflicting requirements, by giving both a closed syllable and a maximal onset; we could represent this as /'pæs.stə/. However, to my knowledge, there is no set of clear principles that determines when ambisyllabicity should be appealed to and when it should not.[23]

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[22] For a discussion of ambisyllabicity in English, see Giegerich (1992:171-72).

[23] Giegerich (1992:172) says "a consonant is ambisyllabic if it is (part of) a permissible onset (cluster) and if it immediately follows a stressed lax vowel.", which would certainly include the /s/ of *pasta* in BrE.

To some extent, moreover, nativization and syllable type may be involved in a cyclical relationship, because it is unclear whether the syllable structure conditions the vowel or vice versa. (The choice of /æ/ will cause a syllable to be closed (BrE /'pæs.stə/), because an English short vowel cannot stand in a stressed open syllable, while the choice of /ah/ will allow an open syllable (BrE /'fah.stə/ or /'mah.stə/).) I hope to find an effective way of dealing with these problems in the future. In the meantime, any effect of coda type will presumably be muted by the presence of ambisyllabic codas amongst the truly open syllables.

In its construction of cells from these factor groups, GoldVarb found several "knockouts", or categorical results,[24] some of which were instructive, while others reflected a small number of tokens. Three of them ('not applicable' in 'following place', 'pause' in 'following manner' and 'final' in 'coda type') related to one fact: /æ/ cannot occur in final position ($n$=18). Words in this class, such as *bra*, *coup d'état*, *éclat* and *spa*, categorically have 'a', because /bræ/ and /spæ/ violate English phonotactics. Goldvarb also found that, in American English, 'a' always appeared after a preceding /w/ ($n$=9) and in words borrowed from Yiddish or Hebrew ($n$=9).[25] Finally, three factors were represented by so few tokens that they were thrown out. In the case of the 'spelling' group, this meant eliminating the whole factor group, because there were no tokens of 'aa' in the corpus and only three of 'ah', leaving only one factor, 'a'.[26]

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However, Jensen (1993:70-72) makes no mention of ambisyllabicity in his discussion of word-internal codas, appealing only to the principle of maximal onsets. Moreover, he reverses the causal relationship between closed syllable and short vowel implied in Giegerich's definition of ambisyllabicity: "if a nonfinal syllable is closed, it tends to have a short vowel." (p. 70).

[24] Varbrul cannot operate when one or more factors produce categorical results; such factors must either be combined with others where appropriate or excluded from the analysis.

[25] In BrE, preceding /w/ was almost categorical in its favoring of 'a' (8/9); Yiddish or Hebrew origin, however, had no effect on nativization (4/9).

[26] A factor group containing only one factor is called a singleton and has to be excluded before a Varbrul analysis is possible. (Of the 3 tokens of <ah> in the corpus, 3/3 in BrE and 2/3 in AmE had 'a'.) The

With all of the knockouts and the 'spelling' group excluded, both a 1-level and a step up/step down Varbrul analysis were performed. The 1-level results are shown in Table 4.

On the basis of this analysis, two factor groups, 'preceding manner' and 'potential harmony', were dropped from subsequent analyses; all others were retained. These decisions were constrained by a desire to maintain an identical set of factor groups for both the AmE and BrE runs, thereby ensuring direct comparabililty. 'Preceding manner' had already shown that preceding /w/ heavily or categorically favors 'a'; preceding /l/ also favors 'a' in both dialects (see Table 4), though not as heavily as /w/. Beyond these findings, the group seemed to hold no further interest; moreover, it was not selected as significant in either the BrE or the AmE step-up run. 'Potential harmony' showed no discernable pattern: in both dialects, another foreign [a] in the phrase ('1') favored 'a' but another [a] in the word ('2') had no effect. Like 'preceding manner', 'potential harmony' was not selected by the step-up run for either dialect.[27] In addition to these changes, the 'orthographic foreignness' and 'source language' groups were simplified; the former because the distinction that had been made between foreign diacritics and foreign sequences of letters appeared to be unimportant, so that these factors could be combined as 'foreign' and thus opposed to 'non-foreign'; the latter because 'source language' had not been selected by the step up analysis in spite of showing a wide range of factor weights, leading to the conclusion that it had been overanalyzed, with significant distinctions intermingled with non-significant ones. It was clear from the results shown in Table 4 that non-European languages were associated with generally high weights, while Latin and Greek had a very low weight, and modern European languages were intermediate. In order to simplify 'source language' so

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other factors excluded because of infrequent occurrence were: in the 'semantic field' group, 'personal names' (n=2), these not being frequent in dictionaries; and in the 'following manner' group, 'following glide' (n=1).

[27] 'Following place' and 'source language' were also not selected in either dialect, but because they showed strong effects in the 1-level analysis (see Table 4) they were retained in order to see how they would behave in future runs. 'Following manner' was selected in BrE but not in AmE; all remaining groups were selected in both dialects.

**Table 4a:** *Results of 1-Level Binomial Varbrul Analysis of AmE data* (initial scheme, "knock-outs" and "singletons" excluded; appl. val. 'a:' against 'æ' and 'v' as non-appls).

(415 cells; No Convergence at Iteration 20;
Input 0.653; Chi-sq./cell 0.9253; L.L. -199.760)

| Group | Factor | Weight | Applic./ Total | Input& Weight |
|---|---|---|---|---|
| Foll. place | labial | 0.532 | 0.59 | 0.68 |
| | coronal | 0.520 | 0.60 | 0.67 |
| | velar | 0.342 | 0.51 | 0.49 |
| Foll. manner | stop | 0.652 | 0.67 | 0.78 |
| | fricative | 0.462 | 0.58 | 0.62 |
| | nasal | 0.395 | 0.52 | 0.55 |
| | /l/ | 0.496 | 0.58 | 0.65 |
| | /r/ | 0.452 | 0.57 | 0.61 |
| Prec. manner | /l/ | 0.699 | 0.71 | 0.81 |
| | initial | 0.495 | 0.51 | 0.65 |
| | other C | 0.478 | 0.59 | 0.63 |
| Coda type | open/am | 0.513 | 0.63 | 0.66 |
| | closed | 0.481 | 0.51 | 0.64 |
| Stress | Primary | 0.560 | 0.64 | 0.71 |
| | Sec. | 0.302 | 0.45 | 0.45 |
| Potential harmony | word | 0.481 | 0.53 | 0.64 |
| | phrase | 0.798 | 0.73 | 0.88 |
| | none | 0.489 | 0.61 | 0.64 |
| Orth. foreign-ness | diacritics | 0.615 | 0.74 | 0.75 |
| | sequence | 0.762 | 0.81 | 0.86 |
| | none | 0.432 | 0.55 | 0.59 |
| Source langauge | Arabic | 0.558 | 0.88 | 0.70 |
| | French | 0.442 | 0.52 | 0.60 |
| | German | 0.583 | 0.81 | 0.73 |
| | Hindi | 0.746 | 0.78 | 0.85 |
| | Italian | 0.515 | 0.67 | 0.67 |
| | Japanese | 0.787 | 0.87 | 0.87 |
| | Latin/Gk | 0.238 | 0.23 | 0.37 |
| | Russian | 0.660 | 0.75 | 0.78 |
| | Spanish | 0.455 | 0.51 | 0.61 |
| | Turkish | 0.856 | 0.83 | 0.92 |
| | Other | 0.456 | 0.61 | 0.61 |

| | | | | |
|---|---|---|---|---|
| Date of entry into English | Medieval | 0.145 | 0.24 | 0.24 |
| | Renaiss. | 0.420 | 0.58 | 0.58 |
| | 19th c. | 0.559 | 0.67 | 0.71 |
| | <W.W.II | 0.572 | 0.71 | 0.72 |
| | >W.W.II | 0.832 | 0.91 | 0.90 |
| Semantic field | arts | 0.801 | 0.80 | 0.88 |
| | object | 0.178 | 0.25 | 0.29 |
| | food | 0.562 | 0.69 | 0.71 |
| | idea | 0.551 | 0.61 | 0.70 |
| | place | 0.608 | 0.79 | 0.75 |
| | religious | 0.952 | 0.95 | 0.97 |
| | non-food | 0.311 | 0.54 | 0.46 |
| | other | 0.628 | 0.80 | 0.76 |

**Table 4b:** *Results of 1-Level Binomial Varbrul Analysis of BrE data* (initial scheme, "knock-outs" and "singletons" excluded; appl. val. 'a' against 'æ' and 'v' as non-appls).

(415 cells; No Convergence at Iteration 20;
Input 0.326; Chi-sq./cell 0.8976; L.L. -198.156)

| Group | Factor | Weight | Applic./ Total | Input& Weight |
|---|---|---|---|---|
| Foll. place | labial | 0.544 | 0.37 | 0.37 |
| | coronal | 0.508 | 0.40 | 0.33 |
| | velar | 0.379 | 0.30 | 0.23 |
| Foll. manner | stop | 0.586 | 0.46 | 0.41 |
| | fricative | 0.440 | 0.35 | 0.27 |
| | nasal | 0.360 | 0.28 | 0.21 |
| | /l/ | 0.710 | 0.44 | 0.54 |
| | /r/ | 0.826 | 0.71 | 0.70 |
| Prec. manner | /l/ | 0.834 | 0.66 | 0.71 |
| | initial | 0.164 | 0.16 | 0.09 |
| | other C | 0.482 | 0.39 | 0.31 |
| Coda type | open/am | 0.569 | 0.46 | 0.39 |
| | closed | 0.395 | 0.24 | 0.24 |
| Stress | Primary | 0.575 | 0.46 | 0.39 |
| | Sec. | 0.231 | 0.18 | 0.13 |
| Potential harmony | word | 0.443 | 0.28 | 0.28 |
| | phrase | 0.802 | 0.53 | 0.66 |
| | none | 0.498 | 0.42 | 0.32 |

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| | | | | |
|---|---|---|---|---|
| Orth. foreign-ness | diacritics | 0.599 | 0.63 | 0.42 |
| | sequence | 0.645 | 0.58 | 0.47 |
| | none | 0.463 | 0.35 | 0.29 |
| Source langauge | Arabic | 0.734 | 0.56 | 0.57 |
| | French | 0.531 | 0.41 | 0.35 |
| | German | 0.567 | 0.57 | 0.39 |
| | Hindi | 0.817 | 0.62 | 0.68 |
| | Italian | 0.474 | 0.40 | 0.30 |
| | Japanese | 0.739 | 0.60 | 0.58 |
| | Latin/Gk | 0.216 | 0.11 | 0.12 |
| | Russian | 0.404 | 0.38 | 0.25 |
| | Spanish | 0.468 | 0.39 | 0.30 |
| | Turkish | 0.502 | 0.33 | 0.33 |
| | Other | 0.334 | 0.33 | 0.19 |
| Date of entry into English | Medieval | 0.142 | 0.10 | 0.07 |
| | Ren. | 0.479 | 0.34 | 0.31 |
| | 19th c. | 0.542 | 0.46 | 0.36 |
| | <W.W.II | 0.594 | 0.48 | 0.41 |
| | >W.W.II | 0.592 | 0.50 | 0.41 |
| Semantic field | arts | 0.795 | 0.60 | 0.65 |
| | object | 0.343 | 0.24 | 0.20 |
| | food | 0.479 | 0.42 | 0.31 |
| | idea | 0.584 | 0.40 | 0.40 |
| | place | 0.654 | 0.55 | 0.48 |
| | religious | 0.410 | 0.48 | 0.25 |
| | non-food | 0.327 | 0..31 | 0.19 |
| | other | 0.575 | 0.53 | 0.40 |

that it might be selected as significant in future runs, therefore, the languages were grouped as European and non-European, while retaining Latin and Classical Greek as a distinct factor.[28]

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[28] Under the simplification, the Yiddish/Hebrew tokens, which had been excluded because they had produced a knockout in AmE, were restored as part of the non-European group. While Yiddish must be considered a European language in many senses, its categorical effect favoring 'a' and its combination with Hebrew, a non-European language, made inclusion in the non-European group of languages the obvious way to proceed (non-European languages favor 'a' more than European languages). 'Russian', with a relatively high weight, might have gone

The smaller set of eight factor groups with 'orthographic foreignness' and 'source language' simplified was submitted to a second analysis, the results of which can be seen in Table 5. On the basis of these results, in an effort to simplify the model further, certain factors were combined when the distinction between them had no significant effect on the log likelihood,[29] again maintaining direct comparability between the AmE and BrE analyses. The factors thus combined were: in the 'following place' group, coronal and labial, leaving a binary opposition of [+back] and [-back]; in 'following manner', /l/ and /r/, as liquids, against all others;[30] in 'date of entry', periods '3' and '4', as there was no significant difference between the 19th century and early 20th century loans; and in 'semantic field', concrete objects and non-food cultural terms were combined as

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in either group but was put in with the European languages. 'Arabic' had a low weight, behaving in this sense like a European language, but this appeared to be due to the large number of medieval Arabic loans (medieval loans are very unlikely to have 'a').

[29] Change in log likelihood (L.L.) is the metric by which Varbrul evaluates modifications of the structure of factor groups. If two factors are combined and the analysis is run again without a significant change in the L.L., it is concluded that the distinction between the two factors was not significant and the combination is adopted (providing it is warranted by other criteria as well). L.L. can be understood as a measure of the predictive power of the model, or the amount of variation it accounts for. The significance of the change in L.L. is calculated using a $\chi^2$ statistic; values that have a $p > 0.05$ are considered non-significant. $\chi^2$ is calculated by subtracting the L.L. of the second analysis from the L.L of the first analysis and multiplying by 2, with degrees of freedom equal to one less than the number of factors combined.

[30] Note that in AmE the order of weights in the 'following manner' group follows the sonority hierarchy exactly (as developed in Clements 1990), with the least sonorous following environments (stops) heavily favoring 'a' and the most sonorous (liquids) disfavoring 'a'. An explanation of this pattern, if indeed it represents more than a coincidence, remains elusive. The BrE weights do not follow the sonority hierarchy; in fact, following liquids favor 'a', the opposite situation from AmE. Mysteriously, in the final analysis presented in Table 6, following liquids behave the same way in both dialects, disfavoring 'a'. This change bears further investigation.

**Table 5a:** *Results of 1-Level Binomial Varbrul Analysis of AmE Data* (revised scheme, with 11 factor groups reduced to 8 and 'orthographic foreignness' and 'source language' simplified; application value 'a' against 'æ' and 'v' as non-applications).

| (372 cells; No Convergence at Iteration 20; Input 0.209; Chi-sq./cell 0.9393; L.L. -190.690) | | | | |
|---|---|---|---|---|
| Group | Factor | Weight | Applic./ Total | Input& Weight |
| Foll. place | labial | 0.504 | 0.27 | 0.21 |
| | coronal | 0.540 | 0.30 | 0.24 |
| | velar | 0.301 | 0.25 | 0.10 |
| Foll. manner | stop | 0.696 | 0.43 | 0.38 |
| | fricative | 0.465 | 0.25 | 0.19 |
| | nasal | 0.413 | 0.21 | 0.16 |
| | /l/ | 0.357 | 0.20 | 0.13 |
| | /r/ | 0.270 | 0.21 | 0.09 |
| Coda type | open/am. | 0.577 | 0.35 | 0.27 |
| | closed | 0.382 | 0.18 | 0.14 |
| Stress | primary | 0.549 | 0.34 | 0.24 |
| | sec. | 0.335 | 0.19 | 0.12 |
| Orth. foreign. | foreign | 0.653 | 0.47 | 0.33 |
| | non-for. | 0.458 | 0.26 | 0.18 |
| Source langauge | European | 0.501 | 0.31 | 0.21 |
| | non-Eur. | 0.748 | 0.42 | 0.44 |
| | Latin/Gk | 0.058 | 0.02 | 0.02 |
| Date of entry into English | Medieval | 0.282 | 0.10 | 0.09 |
| | Renaiss. | 0.410 | 0.23 | 0.16 |
| | 19th c. | 0.568 | 0.36 | 0.26 |
| | <W.W.II | 0.591 | 0.43 | 0.28 |
| | >W.W.II | 0.741 | 0.53 | 0.43 |
| Semantic field | arts | 0.856 | 0.54 | 0.61 |
| | object | 0.385 | 0.15 | 0.14 |
| | food | 0.584 | 0.38 | 0.27 |
| | idea | 0.575 | 0.31 | 0.26 |
| | place | 0.127 | 0.15 | 0.04 |
| | religious | 0.540 | 0.43 | 0.24 |
| | non-food | 0.392 | 0.33 | 0.15 |
| | other | 0.539 | 0.40 | 0.24 |

**Table 5b:** *Results of 1-Level Binomial Varbrul Analysis of BrE Data* (revised scheme, with 11 factor groups reduced to 8 and 'orthographic foreignness' and 'source language' simplified; application value 'a' against 'æ' and 'v' as non-applications).

| (373 cells; No Convergence at Iteration 20; Input 0.246; Chi-sq./cell 1.1190; L.L. -202.969) | | | | |
|---|---|---|---|---|
| Group | Factor | Weight | Applic./ Total | Input& Weight |
| Foll. place | labial | 0.554 | 0.33 | 0.29 |
| | coronal | 0.532 | 0.34 | 0.27 |
| | velar | 0.258 | 0.17 | 0.10 |
| Foll. manner | stop | 0.525 | 0.36 | 0.27 |
| | fricative | 0.427 | 0.27 | 0.20 |
| | nasal | 0.447 | 0.24 | 0.21 |
| | /l/ | 0.687 | 0.42 | 0.42 |
| | /r/ | 0.672 | 0.57 | 0.40 |
| Coda type | open/am. | 0.650 | 0.43 | 0.38 |
| | closed | 0.277 | 0.13 | 0.11 |
| Stress | primary | 0.582 | 0.39 | 0.31 |
| | sec. | 0.212 | 0.14 | 0.08 |
| Orth. foreign. | foreign | 0.704 | 0.52 | 0.44 |
| | non-for. | 0.442 | 0.28 | 0.21 |
| Source langauge | European | 0.493 | 0.34 | 0.24 |
| | non-Eur. | 0.609 | 0.41 | 0.34 |
| | Latin/Gk | 0.278 | 0.11 | 0.11 |
| Date of entry into English | Medieval | 0.151 | 0.10 | 0.06 |
| | Renaiss. | 0.466 | 0.28 | 0.22 |
| | 19th c. | 0.581 | 0.40 | 0.31 |
| | <W.W.II | 0.576 | 0.39 | 0.31 |
| | >W.W.II | 0.545 | 0.38 | 0.28 |
| Semantic field | arts | 0.785 | 0.54 | 0.54 |
| | object | 0.414 | 0.22 | 0.19 |
| | food | 0.416 | 0.30 | 0.19 |
| | idea | 0.557 | 0.34 | 0.29 |
| | place | 0.546 | 0.45 | 0.28 |
| | religious | 0.433 | 0.33 | 0.20 |
| | non-food | 0.418 | 0.31 | 0.19 |
| | other | 0.576 | 0.47 | 0.31 |

objects, and food items, ideas/concepts, religious terms[31] and the 'other' category were combined as 'other', leaving only arts terms and place or national names as originally conceived.

## 3. Results

All of the changes described above are reflected in the results presented in Table 6, which will be the basis of the discussion that follows. Results are shown first with 'a' as the application value, then with 'æ' as the application value, for each of AmE and BrE. They reflect the "best-runs" selected by Varbrul's step up/step down procedure; the statistics for each run appear below the results. Since 'a' and 'æ' are opposite outcomes in the choice process, the effects on one should be the inverse of the effects on the other; this is consistently true of the data in Tables 6. Table 7 shows the order in which the factor groups were selected by the step up routine in each run, with the *p* value or significance level associated with each factor group in its Level 1 run.

A summary of the significant effects in each dialect is shown in Table 8. The general conclusion to be drawn from this table is that AmE and BrE generally agree on the nature of the effects, in other words on how the factors in each group behave, but there are important differences between the dialects in the size or strength of the effects. With respect to variation in foreign [a] nativization, then, British-American differences are of a quantitative, rather than a qualitative nature.

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[31] In the initial results shown in Table 4, religious terms very heavily favored 'a' in AmE while having a neutral effect in BrE. In the next analysis (Table 5), this effect disappeared: religious terms had a neutral effect in both dialects, so that they could be combined with the other factors. The change in the weight associated with religious terms is mysterious: the factor went from 20 applications out of 21 tokens in the Table 4 results to 9 out of 21 in Table 5. This obviously bears further investigation.

**Table 6:** *Results ("best runs") of Step Up/Step Down Varbrul Analysis* (final scheme, with additional factor combinations, showing results of 2 runs, first with 'a' as appl. val., then with 'æ'). Varbrul stats for each run appear below.

| GROUP | FACTOR | AmE 'a' | BrE 'a' | AmE 'æ' | BrE 'æ' |
|---|---|---|---|---|---|
| 1) Foll. place | [-back] | n.s. | 0.534 | 0.489 | n.s. |
| | [+back] | n.s. | 0.278 | 0.577 | n.s. |
| 2) Foll. manner | liquid (/l,r/) | 0.525 | 0.671 | n.s. | 0.327 |
| | other C | 0.353 | 0.471 | n.s. | 0.529 |
| 3) Coda type | open/ambi | 0.593 | 0.652 | 0.466 | 0.411 |
| | closed | 0.359 | 0.274 | | 0.636 |
| 4) Stress | primary | 0.552 | 0.586 | 0.440 | 0.421 |
| | secondary | 0.327 | 0.201 | 0.697 | 0.779 |
| 5) Orth. foreign. | foreign | 0.666 | 0.724 | 0.279 | 0.324 |
| | non-for. | 0.454 | 0.436 | 0.563 | 0.549 |
| 6) Source lang. | European | 0.513 | n.s. | 0.547 | 0.492 |
| | non-Eur. | 0.720 | n.s. | 0.307 | 0.400 |
| | Latin/Gk | 0.064 | n.s. | 0.732 | 0.772 |
| 7) Date of entry into English | < 1500 | 0.218 | 0.136 | 0.841 | 0.862 |
| | 1500-1799 | 0.413 | 0.456 | 0.587 | 0.528 |
| | 1800-1945 | 0.580 | 0.588 | 0.443 | 0.434 |
| | 1946-pres. | 0.753 | 0.574 | 0.139 | 0.406 |
| 8) Sem. field | arts | 0.859 | 0.780 | 0.172 | 0.241 |
| | place/nat. | 0.122 | 0.587 | 0.485 | 0.454 |
| | object | 0.384 | 0.417 | 0.753 | 0.639 |
| | other | 0.575 | 0.491 | 0.390 | 0.462 |

| STAT. | AmE 'a' | BrE 'a' | AmE 'æ' | BrE 'æ' |
|---|---|---|---|---|
| Cells | 181 | 173 | 153 | 182 |
| Conv.? | No | No | No | No |
| Input | 0.212 | 0.374 | 0.253 | 0.658 |
| *p* | 0.006 | 0.042 | 0.009 | 0.019 |
| Log Lkhd | -201.045 | -216.380 | -208.079 | -228.813 |

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**Table 7:** *Order of Factor Group Selection in best step up/step down runs*, with *p* values from Level 1 (each group tested individually, cut-off for significance $p < 0.05$).

| AmE<br>a.v. 'a' | BrE<br>a.v. 'a' | AmE<br>a.v. 'æ' | BrE<br>a.v. 'æ' |
|---|---|---|---|
| 6 (0.000) | 3 (0.000) | 8 (0.000) | 4 (0.000) |
| 3 (0.000) | 4 (0.000) | 6 (0.000) | 3 (0.000) |
| 8 (0.000) | 5 (0.000) | 7 (0.000) | 6 (0.000) |
| 7 (0.000) | 2 (0.009) | 5 (0.000) | 8 (0.000) |
| 2 (0.069) | 8 (0.008) | 4 (0.001) | 5 (0.000) |
| 4 (0.007) | 7 (0.008) | 3 (0.017) | 2 (0.023) |
| 5 (0.000) | 1 (0.009) | 1 (0.193) | 7 (0.000) |

The most important quantitative differences between AmE and BrE nativization of foreign [a] are illustrated in the following graphs. These present a combined analysis of the runs that looked at 'a' and 'æ' as application values by subtracting the weights associated with selecting 'æ' from the weights associated with selecting 'a' (*i.e.*, AmE /o/ or BrE /ah/). This procedure treats one of the choices, 'æ', as a negative value, the opposite outcome in the choice process from 'a', a positive value, so that when the difference between the weights is a positive number, 'a' is favored; when it is negative, 'æ' is favored. In the graphs, a bar or line below the x-axis means that 'æ' is favored; a bar or line above the x-axis means that 'a'is favored.

Graph 1, the effect of coda type, shows that the dialects agree that 'a' is favored in open syllables and 'æ' in closed. However, the effect is about twice as big in BrE as in AmE. An illustration of this difference would be the word *mantra*, a closed syllable, which has /o/ in AmE but /æ/ in BrE. As stated above, this effect might have been much bigger if true open syllables and syllables with ambisyllabic codas had been distinguished. However, even with these two categories lumped together, the strength of the constraint against 'æ' in open syllables gives a good idea of the character of this variable.

In Graph 2, showing the effect of stress, the biggest effect is that of secondary stress, which strongly favors 'æ'. As in the last graph, the effect is again much bigger in BrE than in AmE. An example of this difference would be the word *kami-*

**Table 8:** *Summary of Factors that affect the choice of AmE /o/ or BrE /ah/ vs. /æ/ in the nativization of foreign [a],* in order of Varbrul step up/step down selection.

| FACTORS CORRELATED WITH /o/ or /ah/ | |
|---|---|
| AMERICAN (/o/) | BRITISH (/ah/) |
| Non-European origin | Open syllable |
| Open syllable | Primary stress |
| Arts connotation | Foreign orthography |
| Recent borrowing | Following liquid (/l,r/) |
| Primary stress | Arts connotation |
| Foreign orthography | Post-medieval loan |
| | Following [-back] C |

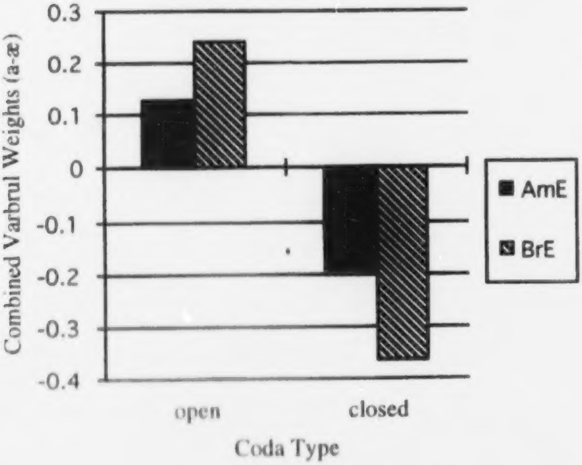
| FACTORS CORRELATED WITH /æ/ | |
|---|---|
| AMERICAN | BRITISH |
| Concrete object | Secondary stress |
| Latin origin | Closed syllable |
| Older borrowing | Latin origin |
| English orthography | Concrete object |
| Secondary stress | English orthography |
| Closed syllable | Foll. C not a liquid |
| | Medieval loan |

(In addition to the factors listed, Varbrul found that /o/ or /ah/ is favored in both dialects after /w/ or /l/ and is categorically required in word-final position (e.g., *bra, spa, coup d'état*), while /æ/ is favored in BrE when word-initial. These factors were not included in the final step up/step down analysis.)

*kaze*, which is /kæmə 'kahziy/ in BrE, with /æ/ in the secondary stress syllable, but /komə 'koziy/ in AmE, with /o/ in both syllables.

Turning now to the effect of semantic field, in Graph 3 the qualitative agreement between the dialects breaks down somewhat. In this factor group, terms from the arts very strongly favor 'a' while objects favor 'æ': on this much AmE and BrE agree. However, place names and national names do not behave too differently from the category 'other' in BrE, whereas in AmE they strongly favor 'æ', as much as objects do.

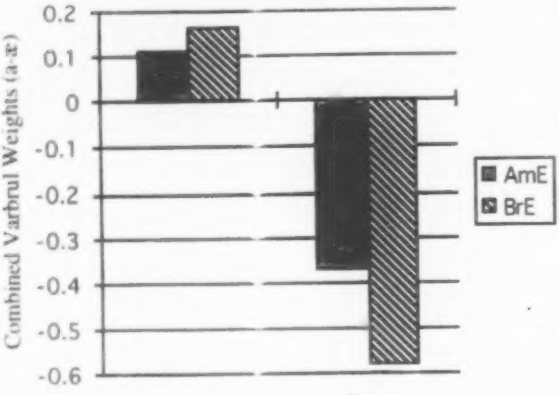
**Graph 1**: Effect of Coda Type (open vs. closed syll.) on Nativization of Foreign [a]



Another way in which this graph differs from the previous two is that in this factor group the effects are much stronger in AmE than in BrE, the reverse of what we saw before.

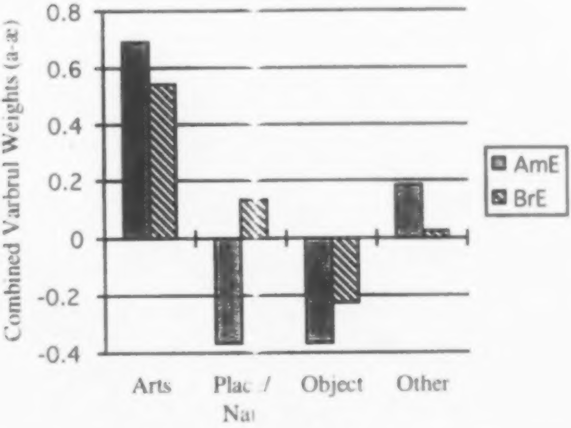
Finally, Graph 4 shows the effect of date of entry, the year when, according to ***Webster's***, the word containing the foreign [a] was first used in English. This is perhaps the most striking of all of the effects, because of the monotonic relation between date of entry and nativization evident in AmE. The more recent the loan, the more likely it is to be nativized with 'a' rather than 'æ', and the trend toward 'a' continues into the present in perfectly linear fashion. In BrE, by contrast, we see a similar increase in the amount of 'a' going from medieval to Renaissance loans but at this point the ratio of 'a' to 'æ' levels off, with no significant difference between the remaining periods. The similar trajectories of the lines up to the third period should be no surprise, of course, as the two dialects would be expected to share nativizations that were established before they broke apart: it is after the split of AmE and BrE in the 19th century that a difference between them emerges. AmE is obviously following an independent course with respect to the nativization of foreign [a].

**Graph 2**: Effect of Stress on Nativization of Foreign [a]



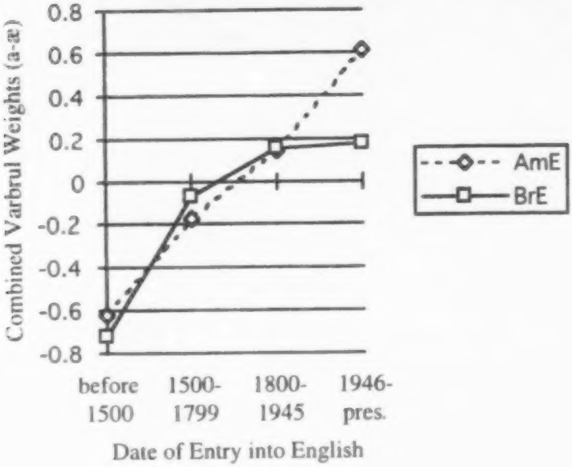
Stress of syll. containing [a]

**Graph 3**: Effect of Semantic Field on Nativization of Foreign [a]



Semantic Field

**Graph 4**: Effect of Date of Entry on Nativization of Foreign [a]



## 4. Discussion

An important generalization can be made about the quantitative differences we have observed between AmE and BrE. The factor groups in which BrE showed the strongest effects – coda type and stress – are phonological in nature. Those in which AmE showed the strongest effects – date of entry and semantic field – are non-phonological. This discrepancy in the importance of phonological and non-phonological factors is evident in Table 7, which lists the significant factor groups for each run in each dialect in order of their selection (factor group numbers correspond to those in Table 6). Note that groups 3 and 4, the phonological effects of coda type and stress, are selected first and second in both BrE runs, whereas they are among the last factors selected in the AmE runs in three of four cases (the exception being group 3 in the 'a' run). By contrast, groups 6, 7 and 8, the non-phonological effects of source language, date of entry and semantic field, were among the first groups selected in both AmE runs but among the last in the BrE runs; in one BrE run, group 6 was not even selected.

How do we account for this general difference in the way AmE and BrE approach the nativization of foreign [a]? The answer lies in the nature of the phonemes involved, in the phonological structure of the vowel systems of the two dialects. In BrE, the choice we are concerned with is essentially between a short vowel, /æ/, and a long vowel, /ah/, and is governed principally by the nature of the syllable containing the foreign vowel: primary stress open syllables heavily favor /ah/, while closed syllables favor /æ/. This means that a word like *llama*, with its open syllable, will have /ah/, while a word like *mantra*, with its necessarily closed syllable, will have /æ/. This effect was shown to be twice as big in BrE as in AmE, and might have been even bigger had ambisyllabic codas and true open syllables been distinguished. AmE, indeed, treats these words indiscriminately with respect to coda type: both of them, *llama* and *mantra*, typically have /o/ in AmE. The principally phonological nature of the choice process in BrE implies that non-phonological factors such as date of entry, meaning, or language of origin will be relatively less important.

The nature of the choice made in AmE is very different. Most speakers of AmE do not have a long /ah/ that contrasts with a short /æ/. This is because, as stated in the Introduction, 'short-o', the vowel in *got* or *stop*, has merged with the long /ah/ of the *father* class: *father* and *bother* have the same vowel, at least according to *Webster's*. In choosing between /æ/ and /o/, then, AmE is not making a choice between short and long, since both alternatives are short vowels, but a choice between two sounds, front [æ] and central or back [a, A]. Where BrE makes a choice governed by quantity, AmE is free to make a choice governed by quality. Sound quantity is a phonological issue, which interacts with phonological factors, as seen in BrE. Sound quality is an æsthetic issue, incorporating dimensions of connotation and prestige. It is not surprising, then, that non-phonological factors, such as the external characteristics and associations of a word, play a larger role in AmE nativization.

This view receives support from the different social connotations surrounding the association of the letter <a> with the sound [a] in British and American English. In BrE, 'broad-a' is a regional, not a social variable. Its use in Southern BrE is as characteristic of Cockneys as of RP speakers; it was not one of the things Eliza Doolittle had to learn from Professor Higgins.

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Therefore, the choice between the sounds in *llama* and *mantra* is a simple lexical or phonological issue, with no social import. In AmE, with the exception of some speakers in Eastern New England, the broad-a class has disappeared, surviving only as a stereotype of traditional Boston speech or BrE. As such, the use of broad-a, or long [a:], in a word written with the letter <a> has socially elevated connotations which are either admirable, if one is positively disposed to such things, or laughable, if one is not. The choice between saying /lomə/ or /læmə/, or /montrə/ or /mæntrə/, in American English is loaded with social import. It seems likely that in most cases where two variants are conceivable, /o/ sounds refined and /æ/ sounds uneducated.

## 5. Further Questions

A number of questions remain outstanding. The first is the one alluded to above: the social or attitudinal character of the variable, which I plan to investigate properly using a questionnaire that asks informants to rate contrasting productions with /o/ and /æ/ along a number of attitudinal dimensions.

Another is what happens in other dialects? I now have data from fieldwork in Canada and New Zealand, as well as dictionary data from Australia, which will help to answer this question. In addition, data I have collected from wordlists read by American and British speakers will shed light on how accurately *Webster's* and the *OED* represent the current state of the variable and expand my investigation into the vast realm of personal and commercial names, which do not appear in dictionaries.

A third issue is what happens to other foreign vowels? Preliminary evidence shows that British-American differences similar to those that obtain with foreign [a] may affect the nativization of other vowels: consider the contrasts between BrE /kobrə/, /mokə/ and /yogɜt/, with the short-o of *hop*, and AmE /kowbrə/, /mowkə/ and /yowgərt/, with the long-o of *hope*; or BrE /nisæn/, /pitə/ and /u'fitsiy/, with the short-i of *hip*, and AmE /niyson/, /piytə/ and /uw'fiytsiy/, with the long-i of *heap*.

A further question that needs to be answered is the exact nature of the relation between the *father* and *bother* classes in AmE, and the effect of the phonetics of short-o in different AmE dialects on the results of nativization: does the phonetic realization of the short-o in *got* or *stop* as relatively front or back, or merged with long-open-o (/oh/, the vowel of *caught*), have any effect on how foreign [a] is nativized? The corresponding structural issue in BrE is the relation between the traditional broad-a class, which arose in the 18th century, and the larger body of foreign [a] words that have an identical vowel but do not contain the environments that conditioned broad-a.[32] Will the addition of hundreds or thousands of new loans to this previously closed and marginal class help to de-marginalize it?

Finally, at least some foreign [a] words show regional variation within American English. For instance, the state names *Colorado* and *Nevada* generally have /o/ in the East, while one or both of them (most often *Nevada*) can have /æ/ in the West. This is something I shall investigate with a telephone survey.

While much work remains to be done, I hope that this paper has demonstrated how quantitative analysis and structural phonological reasoning can be used to establish at least some order in the superficial chaos that attends the nativization of foreign [a] in English.

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[32] As stated above, broad-a was a change operating on ME short-a, usually in closed syllables, e.g. *past, path*. Prototypical BrE foreign [a] words with /ah/, like *llama* or *plaza*, let alone *bra*, do not fit this description.

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# Rule Inversion in a British English Dialect: A Sociolinguistic Investigation of [r]-Sandhi in Newcastle upon Tyne[*]

Paul Foulkes

## 1. Introduction

Although [r]-sandhi is widely referred to in the phonological and phonetic literature on English, descriptions of it have rarely been based on analysis of any large corpus. Trudgill (1974) included intrusive [r] as a variable in his Norwich study, but found it to be used categorically and therefore paid little attention to it. The only other similar study is that by Bauer (1984), who analysed 37 RP speakers reading a short passage which contained 10 possible linking [r] and 2 possible intrusive [r] sites. This data-base is quite limited, but it is interesting that Bauer concludes "although there is variability in the use of linking /r/ in RP there is little evidence of the variation being linked to any of the kinds of factors that would be expected from Labovian research" (1984:77).

In this paper I report the findings of an investigation of [r]-sandhi using a large corpus collected in the city of Newcastle upon Tyne (the largest urban centre in the north east of England). The corpus comprises samples both of naturalistic speech and word-list readings, sampled to reflect a broad cross-section of the population in terms of age, sex and broadly-defined socio-economic class. The patterns which emerge reveal [r]-sandhi to be a more complex process than is generally acknowledged, correlating with social and even stylistic factors. The evidence from Newcastle is then used to assess the most prominent accounts in the phonological literature, supporting an analysis in terms of rule inversion (Vennemann, 1972). More generally the study demonstrates that corpus-based approaches can make a significant contribution to theoretical research—phonological patterns are identified which lie beyond the scope of methods based on unsystematic and unaccountable observation, in turn facilitating evaluation of competing theoretical analyses.

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[*] Thanks to Jim Milroy, Lesley Milroy, James Myers, and Dominic Watt for many helpful suggestions regarding the work presented here. Thanks also to David Walshaw for statistical advice. In my enforced absence, Lesley Milroy kindly presented a version of this paper at NWAVE 25.

The paper begins with a description of [r]-sandhi and a brief synopsis of previous accounts (section 2). The sociolinguistic study and its results are described in section 3, and the phonological implications of the results are outlined in section 4.

## 2. [r]-Sandhi

In 'non-rhotic' varieties of English [r] can only be realised before a vowel. As a result, there are phonologically conditioned alternations between Ø and [r] in some words. For historical reasons the alternation only occurs after the set of vowels /ɔ: ɑ: ə/ (or their dialectal equivalents). Where the [ɹ] is etymologically appropriate it is termed 'linking [r]', examples of which are given in (1):

| | | |
|---|---|---|
| (1) | pre-pausal | dollar [Ø] |
| | pre-consonantal | dollar [Ø] bill |
| | pre-vocalic | a dolla[r] or two |
| | in derived forms | dolla[r]isation |

For speakers of some dialects the [r]-Ø alternation has been extended to certain words which did not historically contain /r/, but which now end in one of the vowels /ɔ: ɑ: ə/. In these cases the [r] is labelled 'intrusive'. Examples are given in (2):

| | | |
|---|---|---|
| (2) | pre-pausal | Tessa [Ø] |
| | pre-consonantal | Tessa [Ø] Smith |
| | pre-vocalic | Tessa[r] O'Brien |

It should also be noted that intrusive [r] is highly stigmatised in prescriptive works, and is often cited in letters of complaint to the BBC and the quality press.

[r]-sandhi is one of the most widely discussed consonantal topics in studies of British English. I proceed now to a brief review of previous descriptive and theoretical accounts.

Until recently phonologists have almost without exception analysed [r]-sandhi within a rule-based framework. The main source of argument has centred on whether the sandhi process is best described as a rule of insertion or of deletion (or a combination of the two), and it is this issue which I shall address with reference to the Newcastle data.[1]

Deletion accounts (e.g. Donegan, 1993) assume that the historical /r/ is still encoded in the speaker's lexical representation. The /r/ segment is deleted before a consonant or pause, but is allowed to surface before a vowel. By contrast, in insertion accounts (e.g. McMahon, Foulkes & Tollfree, 1994) there is said to be no lexically-encoded /r/. Instead, it is proposed that /r/ is inserted by rule after the set of vowels /ɔ: ɑ: ə/, if another vowel follows. The deletion and insertion analyses are illustrated in (3):

| (3) | /r/-DELETION | /r/-INSERTION |
|---|---|---|
| underlying | /dɒlər/ | /dɒlə/ |
| *dollar* | | |
| before C | DELETE /r/ | —— |
| *dollar bill* | [dɒlə b—] | [dɒlə b—] |
| before V | —— | INSERT /r/ |
| *dollar or two* | [dɒlər ɔ:—] | [dɒlər ɔ:—] |

I return to address the deletion-insertion debate in section 4, with reference to the findings of the investigation into Newcastle English. The next section summarises the fieldwork and results of this study.

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[1] There are more recent accounts within Government Phonology (Harris, 1994) and Optimality Theory (McCarthy, 1993). For discussion of these models see Durand (1997) and Foulkes (1997).

## 3. The Sociolinguistic Study

The empirical basis for the [r]-sandhi findings is provided by a sociolinguistic study carried out in Newcastle upon Tyne.[2] Fieldwork has yielded recordings of 32 adult speakers, divided according to the criteria listed in (4).

(4) 2 age groups - 16-25; 45-65 years
2 genders - male; female
2 classes - WC; MC
4 speakers per cell

Informants were recorded first in a single sex dyadic conversational exchange for around 50 minutes. They were then asked to read a word-list constructed to elicit citation forms containing numerous variables under investigation. A sentence was included to elicit intrusive [r].

The whole corpus was analysed auditorily. Potential [r]-sandhi sites in the conversational material were identified, and numerical scores for two variants, [r] and Ø, were compiled for each speaker before log-linear statistical analysis was carried out.[3]

### 3.1. Results: Linking [r]

Linking [r] is clearly favoured by older speakers and by the middle class in Newcastle. Older speakers in all groups score over 20%

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[2] This study, along with a similar one carried out in the city of Derby, forms part of an ongoing research project entitled "Phonological variation and change in contemporary spoken British English", supported by the UK Economic and Social Research Council (grant no. R000 234892). My co-researchers are Gerry Docherty, Jim Milroy, Lesley Milroy, David Walshaw and Penny Oxley.

[3] The Ø variant is more precisely defined as 'not [r]' rather than zero, since in some cases where [r]-sandhi is absent, speakers insert a glottal stop between two adjacent vowels. Scores for [r] conflate various types of rhotic. These are, in the main, alveolar approximants, but some taps were used, and there is a rapid spread of a labial or labio-dental [ʋ] in much of England. See Foulkes (1997) for further discussion of this variant.

higher than the corresponding younger group. Similarly, all middle class groups score higher than the corresponding working class cohort. Statistical analysis shows that both age and class (but not gender) are overwhelmingly significant ($p<0.001$). There is, therefore, a marked sociolinguistic patterning of linking [r] usage in Newcastle, which contrasts with the absence of sociolinguistic correlation found in the studies by Bauer (1984) and Trudgill (1974). Note also that the age group finding indicates that production of linking [r] is decreasing over apparent time, and may thus be heading towards elimination from the dialect. The direction of this change may surprise many observers, since it is almost always assumed that linking [r] remains stable whilst intrusive [r] may be spreading.

This point is illustrated more clearly by the data in Table 1, which presents scores for the two groups at the poles of the continuum of variation, namely the older MC and younger WC speakers. (The data in Table 1 are therefore a subset of those in Figure 1, but with male and female scores combined, since gender was not found to be relevant in the statistical analysis.)

Linking [r] is not far from categorical for the older MC, at around 80%. The counter-examples for the most part involve a

Figure 1: % linking [r] in Newcastle, by speaker group
(number above each bar = N tokens analysed)

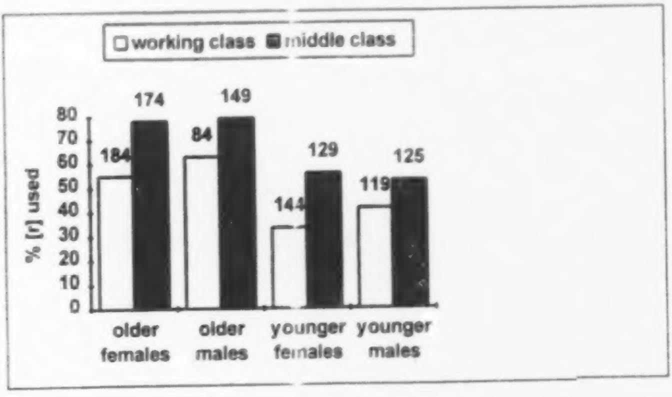

Table 1: Linking [r], selected Newcastle groups

| | N tokens | [r] used | % [r] |
|---|---|---|---|
| older MC | 323 | 254 | 78.6 |
| young WC | 263 | 97 | 36.9 |

glottal stop being produced between the two relevant vowels. By contrast the young WC speakers are clearly abandoning the use of linking [r]—overall they produce it in just 37% of cases.

However, looking more closely we find that there is a marked degree of lexical restriction underlying this distribution: the word *for* accounts for 44 of the 97 examples where [r] is used by this group. Where *for* occurs in the young WC corpus, linking [r] is produced in 76% of cases; but for all other lexical items we find linking [r] applies in just 27% of cases. Thus, with the exception of that single item *for*, linking [r] is otherwise in the process of being erased from the accent by these younger speakers. These findings are very interesting from a phonological point of view, as we shall see later.

### 3.2. Results: Intrusive [r]

Table 2 gives the intrusive [r] results by social group. What is most striking is how rare intrusive [r] is in Newcastle: only 7 tokens emerged from a potential 82 cases, in a corpus containing around 13 hours of material. This gives an overall appearance rate of just 8.5%. In the speech of 15 of the 16 MC speakers, and 11 of the 16 WC speakers, intrusive [r] does not occur at all.

Table 2: Intrusive [r] usage in Newcastle, by speaker group

| | WC | | MC | |
|---|---|---|---|---|
| | N | [r] | N | [r] |
| older females | 11 | 3 | 13 | 0 |
| older males | 5 | 1 | 10 | 0 |
| young females | 7 | 1 | 20 | 1 |
| young males | 4 | 1 | 12 | 0 |

It is also apparent from Table 2 that intrusive [r] usage is mainly a characteristic of the lower socio-economic group: six of the seven [r] tokens are produced by WC speakers. For the WC as a whole intrusive [r] is employed in 22.2% of potential cases. These figures contrast with those of the MC, where only one token from 55 has [r], amounting to just 1.8%. The class effect is in fact highly significant (p=0.015). Statistical analysis therefore shows both intrusive and linking [r] to be sociolinguistically correlated in Newcastle.

The 7 tokens of intrusive [r] and the social characteristics of the speaker responsible are listed in (5):

| | | |
|---|---|---|
| (5) | Amanda[r] Orton | young MC female |
| | ...in the wilds of Siberia[r] and... | older WC female |
| | a place for Sylvia[r] on it | older WC female |
| | we saw[r] it all | older WC female |
| | little do I know [...dəɹ...] | older WC male |
| | just to follow on [...fɒləɹ ...] | young WC female |
| | when I saw[r] it | young WC male |

The figures presented in Table 2 are derived from analysis of data recorded by speakers in dyadic conversational exchange. However, recall that intrusive [r] was also tested for in the word-list, in the trigger sentence *put a comma in it*. Word-lists are designed to elicit citation forms, forcing speakers to be comparatively self-conscious of their speech as they read out single lexical items into a microphone. Previous studies of [r]-sandhi have universally agreed that the use of intrusive [r] is socially stigmatised. Therefore it is predicted that speakers should try to avoid using intrusive [r] when speaking in more self-conscious styles (e.g. Gimson, 1980:208; Brown, 1988:145; McMahon et al, 1994:306; Spencer, 1996:236).

In light of this, a remarkable finding emerges on analysis of the Newcastle word-list data. As the results in Table 3 indicate, no fewer than 14 speakers actually produced [r] when reading the

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Table 3: Intrusive [r] usage in word-list style, Newcastle speakers

| | N | [r] | % [r] |
|---|---|---|---|
| middle class | 13 | 10 | 76.9 |
| working class | 15 | 4 | 26.7 |
| TOTAL | 28 | 14 | 50.0 |

trigger sentence. Ten of these were middle class speakers.[4]

The 14 tokens of intrusive [r] collected from just 28 read sentences contrast markedly with the findings from the conversational data, where only 7 tokens emerged from 13 hours of material! For WC speakers there is little difference between the proportional usage of [r] in the word-list data (26.7%) and conversational data (22.2%). But while MC speakers avoid [r] almost totally in their everyday speech, three quarters of them use [r] in the reading task.

This would seem to indicate that intrusive [r] is not perceived as stigmatised by these speakers. Rather, they treat intrusive [r] as what would traditionally be called a prestige feature, which conflicts starkly with the received wisdom that intrusive [r] is highly stigmatised.

It is not my intention to speculate at length on this unexpected style-shifting. However, the reason behind it is probably connected to the fact that, whilst intrusive [r] is not a feature of the local dialect, informants are nevertheless used to hearing it in almost all other non-rhotic varieties. This includes the standard spoken form RP as well as read speech, for example by newscasters and announcers on television and radio. Newcastle inhabitants therefore recognise intrusive [r] as a feature of relatively formal styles, and so use it themselves when reading aloud. Middle class speakers have been shown in many previous studies to be more sensitive to perceived higher prestige forms of speech, such as those typically used in the media. As a result, it is the middle class who make the greater conscious effort to incorporate features of non-local forms into their own speech.

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[4] Note that four speakers inserted a clearly perceptible pause after reading the word *comma*, such that sandhi could not apply. Their scores are therefore omitted from Table 3.

### 3.3. Summary of Results

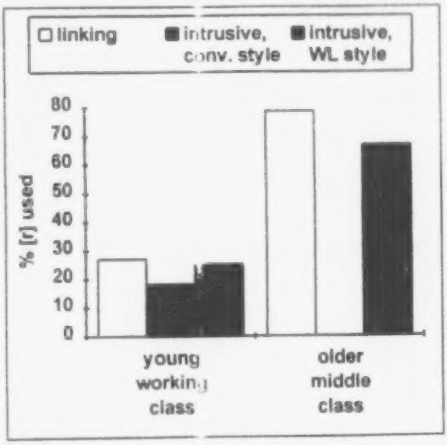
In sum, the study reveals an unexpected complexity in [r]-sandhi usage in Newcastle. Linking and intrusive [r] are both sociolinguistically correlated and intrusive [r] also shows stylistic patterning. The results in themselves conflict with previous descriptions of [r]-sandhi, but they furthermore pose interesting problems for phonological modelling. These will be discussed in the remainder of the paper.

## 4. Phonological Implications

What is obvious from the findings presented above is that simple accounts in terms of insertion or deletion are not going to be adequate to model all the complexities we find in Newcastle English. Instead, the variation in the data forces us to propose different analyses for different speaker groups.

Figure 2 summarises the results already presented, but again focuses only on the two polar ends of the dialect continuum, the older MC and younger WC. From left to right Figure 2 displays scores for linking [r] (omitting the item *for*); intrusive [r]

Figure 2: summary of [r]-sandhi, selected speaker groups



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in conversational data (recall that no tokens at all were produced by older MC speakers); and intrusive [r] in word-list style.

Older MC speakers have 80% linking [r] (which means we can consider it to be close to categorical) but no intrusive [r] at all in conversational style. These speakers therefore maintain a division of the lexicon which is entirely appropriate from a diachronic perspective: words which contain an etymological /r/ are treated wholly separately from those which do not. There is no confusion regarding which division of the lexicon a particular item belongs to, and therefore intrusive [r] cannot apply. For these speakers, therefore, a deletion analysis would be adequate: they have /r/ encoded in those items which contain a historical /r/, allowing it to surface only before vowels. If there is no etymological /r/, of course, it cannot surface, which accounts for the absence of intrusive [r].

A complication arises when we examine the word-list data. Although intrusive [r] is forbidden in casual speech, speakers can and do produce it when conscious of their speech. These instances have to be explained by a hyper-adaptive rule of insertion which is connected to stylistic criteria. In effect, therefore, this means that *both* deletion *and* insertion are active for older MC speakers.

The same analysis, however, will not adequately account for the observed behaviour of the young WC speakers. For this group, as Figure 2 illustrates, linking [r] is on the wane (and largely restricted to the word *for*). At the same time, intrusive [r] *is* found in their speech, and to about the same degree of frequency in both conversational and word-list styles. We can consider, then, that these younger speakers have largely erased that historical division in the lexicon which their older MC counterparts still maintain: items with etymological /r/ are increasingly being treated in the same way as items which lack etymological /r/.

Moreover, the great majority of lexical items never occur with a final [r], even before vowels. It therefore seems appropriate to suggest that their representations no longer contain /r/. A minority of items, notably *for*, generally do occur with [r]. So, it is possible to argue that these items still contain encoded /r/, and the last vestiges of the deletion rule apply to them. But this would not account for the development of intrusive /r/. Instead, a more satisfactory analysis is provided by a traditional rule of insertion. That is, no /r/ is encoded in any item, irrespective of the item's history. A few items like *for* are marked to undergo [r] insertion before vowels. But since there is now no encoded difference between forms with etymological /r/ and those without, speakers may make 'errors' in where they apply the rule of insertion—errors in the sense that insertion can occur where it is not historically appropriate. These 'errors' yield tokens of intrusive /r/.

In sum, this means that in Newcastle English a process of rule inversion (in the sense of Vennemann, 1972) has taken place, which is illustrated in (6).

| (6) | older MC | | young WC |
|---|---|---|---|
| underlying<br>*for, Tessa* | /fɔːr/ | /tɛsə/ | /fɔː/<br>/tɛsə/ |
| before C | DELETE<br>[fɔː ðɛm] | —— | —— |
| before V | —— | —— | INSERT<br>[fɔːr ɪt]<br>[tɛsər o—] |

Young WC speakers have restructured the lexicon and composed a phonological rule which operates in a mirror-image fashion to the deletion rule which is still operative for older MC speakers. It is 'mirror-image' in that the rule causes the opposite effect (insertion rather than deletion) in complementary phonological contexts (in this case before vowels, rather than before consonants and pause).

## 5. Conclusion

This paper has reported findings from an investigation of [r]-sandhi based on sociolinguistic fieldwork material collected in Newcastle, which (in tandem with a similar study in the city of Derby) constitutes the most extensive study to date of this much discussed topic. The study reveals [r]-sandhi to be more complex than has previously been acknowledged, with both linking and

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intrusive [r] correlating with social and even stylistic variables. There is also evidence for change in progress, and in a surprising direction. The findings pose some interesting challenges for traditional phonological accounts, supporting in some cases analysis in terms of a deletion rule, and in others of an insertion rule. When viewed as a whole the dialect appears to manifest an archetypal case of rule inversion.

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# Optimality and the Syntax of Lectal Variation*

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## 1. Introduction

This paper presents an account of English language variation in India. It has been a relatively daunting task to demonstrate that Indian vernacular English is just as systematic and logical as any other variety of English, say "standard" Indian, British or American English. This paper focuses on the syntactic differences between two varieties of Indian English — the standard and the vernacular — restricting the discussion to the syntax of null arguments *(pro* drop) and *wh*-question formation. These data, I will argue, are confounding for the mainstream syntactic models (Chomsky 1981, 1986, 1995), but when the same data are viewed from the optimality vantagepoint (Prince and Smolensky 1993), the differences between the two varieties follow as a natural consequence of the architecture of the theory.

Despite the advances in sociolinguistic theory over the past several decades, we still find in the literature numerous instances of syntactic variation presented as grammatical anomalies. Quirk (1990), echoing Prator (1968), claims, for example, that "the English of the teachers (in India and Nigeria) themselves inevitably bears the stamp of locally acquired *deviations from the standard* (British English) language ..." (ibid:8, emphasis added).[1] This discourse, we now know, is not new; it is a

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[*] Versions of this paper were presented at second International Conference on World Englishes held in Nagoya, Japan in May 1995, twenty-fifth annual meeting on New Ways of Analyzing Variation held in Las Vegas in October 1996, and the eighteenth South Asian Language Analysis roundtable held at Jawaharlal Nehru University, New Delhi, India in January 1997. I am grateful to the participants of these meetings for helpful comments, suggestions and questions. I wish to especially thank Salikoko Mufwene, Robert Stockwell, and Miriam Meyerhoff for comments, help and encouragement. The usual disclaimers, of course, apply.

[1] It is instructive to see how certain ideological startegies and rhetorical methods are continulaly manipulated to legitimize and rationalize the power of theoretical constructs like "standard", "deviant", etc. For a discussion, see Kachru (1996) and Bhatt (1995a).

reproduction of the early 60s discourse on Black English (African American Vernacular English), as evidenced in the works of Bereiter, Engelmann, and Jensen. What has changed in this ideological discourse is the geopolitical setting — from the inner city schools of the United States to English language education in India. With respect to AAVE, Labov (1970), Wolfram & Fasold (1974), among many others, were able to demonstrate successfully the empirical, methodological and theoretical-conceptual problems with the deficit model of Bereiter et al. This paper replicates the spirit of Labov and Wolfram & Fasold in dealing with English language variation in India. The following two principles guide the rationale of the study presented in this paper:

(1) (a) Principle of error correction (Labov 1982:173)
A scientist who becomes aware of a widespread idea or social practice with important consequences that is invalidated by his (or her) data is obliged to bring this error to the attention of the widest possible audience.
(b) Principle of linguistic gratuity (Wolfram 1993:227)
Investigators who have obtained linguistic data from members of a speech community should actively pursue positive ways in which they can return linguistic favors to the community.

The goal of this paper is to present a tidy demonstration of the syntactic differences between two varieties of English in India: the standard Indian English (SIE) and the Indian vernacular English (IVE). Thereafter, an optimality-theoretic (Prince and Smolensky 1993) account is presented which is able to yield the empirical generalization (and the intuition) that the grammar of IVE is just as systematic and logical as that of SIE.[2] This paper also presents, even if only tangentially, a strong argument for using Optimality Theory (OT) as a framework of research on language variation and change.[3]

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[2] The "real" question here is whether this intuition actually plays a role in the grammatical process or whether it dissolves into taxonomic artifacts.

[3] Although I recognize that eventually a restrictive theory of language use is obligated to declare the precise nature of the "context of situation", which presumably yields observed realization of linguistic

Before discussing the methodology, the data, the generalizations, and the analysis, a brief socio-historical description of English in India will shed some light on the regional cultural identity of its users — one that is unrelated to the Judeo-Christian and Western ethos and its canons — and on the process of acculturation of the English language in local (Indian) contexts of use.

## 2. English in India: Socio-historical Context[4]

English came to India around 1600 via the establishment of the East India Company. Although initially severely limited in the numbers of its speakers, English bilingualism increased with various strategies of trade and proselytizing, especially during 1614-18th century (cf. Duff 1837, Richter 1908, Law 1915). The proselytizing strategy was chiefly instrumental in introducing English bilingualism to the Indian subcontinent. Proselytization was rationalized in several ways; Grant (1831-31:60-61) had the following to say:

> The true curse of darkness is the introduction of light. The Hindoos err, because they are ignorant and their errors have never been laid before them. The communication of our light and knowledge to them, would prove the best remedy for their disorders.

After 1765 when East India Company established political control in India, and especially in early 19th century, the spread of English was aided and abetted by support from prominent Indians

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expressions of a certain communicative act; I submit that such an attempt is beyond the scope of this paper. As a very brief, yet bold speculation I suggest that some articulated theory of diglossia, along the lines of Ferguson (1959) – where certain (H/L) forms are tagged with certain (H/L) functional domains — may account for the observed choices among the competing candidates of linguistic expressions (e.g., the alternation in the use between differentiated and undifferentiated tags; see Bhatt 1995b, for some discussion).

[4] Most of the discussion in this section is taken from Kachru (1983, 1996).

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led by Raja Ram Mohan Roy, Dwarka Nath Tagore, and Rajunath Hari Navalkar, who preferred English to Indian languages for academic, scientific, and other intellectual inquiry. This local demand for English, coupled with Thomas B. Macaulay's Minute of 1835, led to the use of English in all official and educational domains. Macaulay's Minute, the first language policy in India, introduced English for the following purpose:

> To sum up what I have said, ... that we ought to employ them (Indians) in teaching what is best worth knowing; that English is better worth knowing than Sanscrit or Arabic; ... We must at present do our best to form a class who may be interpreters between us and the millions we govern; a class of persons, Indian in blood and colour, but English in taste, in opinions, in morals, and in intellect.

Although English instruction created bilinguals, it is worth pointing out that the models for pedagogy and acquisition were not native speakers. As Kachru (1996:907) notes: "Whatever the assumptions, in reality the teaching of English was primarily in the hands of the locals, and not with the native speakers of the language. ... It was, therefore, not unusual to find teachers with Irish, Welsh, or Scottish backgrounds overseeing the local teachers and educators involved in the teaching of English, who provided the models for the teachers, both in class and outside it." And, further, as the use and users of English increased, so did its acculturation to non-Western sociolinguistic contexts.

By the time India got its independence from Britain in 1947, English was firmly established as a medium of instruction and administration. With respect to the role of English in post-Colonial India, precious little changed: English still enjoys the status of associate official language; it continues to be the language of the legal system and the Parliament; it is one of the three mandatory languages introduced in schools; English newspapers are published in twenty seven of the twenty nine states and union territories, and they command the highest circulation in terms of the total reading public; the percentage of books published in English is higher than the percentage of books published in any other language; and, finally, in 1971, 74% of India's scientific journals and 83% of nonscientific journals were published in

English (Kachru 1990: 35-36). Presently, India is the third largest English-using nation (60 mil) after the USA and the UK.

As a result of over 200 years of contact with native Indian languages, English has become an Indian language, both in its structure and use. And like other natural languages, English in India displays a hierarchy of varieties — from standard (monitored) to vernacular (unmonitored). The standard and the vernacular are stable systems; the difference between them is a function of the formality of the context, in the sense of Labov (1972). Thus, the Standard Indian English is the variety used self-consciously by educated speakers in any formal domain of interaction, whereas the Indian Vernacular English is the variety used by the same speakers in routine social interactions, without exercising any conscious control of language use.

## 3. Methodology

The proposal of language variation adopted in this paper is premised on two standard assumptions: (i) linguistic competence is the knowledge of what constitutes as optimal linguistic expression within a structured range of plausible alternatives, and (ii) the grammar of IVE is a product of the dynamics of language contact. The grammar is defined as a structured collection of behavioral tendencies; the job of the grammarian, then, is (a) to collate the observed tendencies into categorical paradigms of patterns (=descriptive adequacy), and (b) to explain why the patterns in fact obtain (explanatory adequacy). Given these assumptions, I propose the following hypotheses:

(2a) IVE is just as systematic and logical as SIE;
(2b) The grammars of IVE and SIE are constrained by the same set of grammatical constraints;
(2c) The differences in the two varieties is a function of how each grammar prioritizes these constraints.

Three kinds of data were collected: (a) recordings of spontaneous speech (à la Labov 1972a); (b) data from published sources, like Kachru (1983) and Trudgill and Hannah (1985); (c) introspective judgments (Labov 1972b). The recorded data were collected using a portable DAT recorder to ensure the highest quality recordings. Altogether nine speakers (five men and four women) participated in the conversations. They all belonged to educated middle-class families, and spoke, in addition to English, fluent Hindi. Their permission to use the recorded material in an anonymous fashion was obtained. The main topics discussed, although not restricted to, were: neighborhood disputes, wedding in the family, trip to a summer resort, and pollution in New Delhi, India. The conversations vary in length from approximately 10-35 minutes, representing approximately 7 hours of collected material. Furthermore, where recordings were not possible, notes were taken of what was said, and in what context. Finally, the data were collated, and a catalogue of the following syntactic properties was drawn:

(3a) inversion/adjunction in wh-questions,
(3b) referential null (topic) subjects (pro-drop),
(3c) null expletives subjects (‘silent’ *it* )

The second kind of data comes from published sources like Kachru (1983) and Trudgill and Hannah (1985). Both of these sources were consulted, where possible, for comparisons with the spontaneous speech data (cf. also, Sells et al. 1994). Finally, judgments on crucial data (inversion in indirect questions, and subject and object pro-drop), unavailable in the published sources, were elicited from 27 native speakers of Indian English, which included high school English teachers, professionals (three doctors, two engineers) and two linguists.[5] In a small test instrument containing 4 items, subjects were given sentences with uninverted direct and inverted indirect questions (e.g., ‘Nobody knows what is Indian government doing these days.’), and subject and/or object pro-drop sentences (e.g., Q: ‘Do you have some tickets?’; A: ‘Sorry, sold already.’). They were then asked to report whether the sentences were spoken by a speaker of Indian English or a speaker of British English. 4 out of 7 English teachers did not accept any instance of Indian vernacular English. The results are given in (4) below:

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[5] Following Wolfram (1986), Sells et al. (1994, 1996), I have drawn comparisons of introspective data with spontaneous speech data to minimize the risk of hypo-and hyper- correction.

(4)

| No. = 27 | Direct Questions w/o inversion | Indirect Question w/ inversion | Subject/ Object pro-drop | Dummy subject pro-drop |
|---|---|---|---|---|
| Indian English | 23 | 20 | 22 | 19 |
| British English | 1 | 1 | 1 | 0 |
| Neither | 4 | 7 | 5 | 8 |

The data in the table in (4) above demonstrates a surprisingly high awareness of endocentric (=Indian) norm of English. The result of this pilot study does replicate Kachru's (1976) study in which more than 55% of Indian graduate students reported using the variety of English they speak as "Indian English", compared to 29% labeling their's "British English". What the data in (4) suggest is that most speakers of Indian English are aware of the vernacular use of English (reported in (4) as Indian English) as well as the educated use of English, which I, for expository purposes, refer to as Standard Indian English (reported in (4) as British English). In the next section, I present syntactic differences between these two varieties, SIE and IVE, and show how the "standard" GB accounts (à la Chomsky 1981, 1986, 1993) fail to capture these differences in a systematic way.

## 4. The Data, the Generalizations, and the Standard Accounts

### 4.1. Extraction Facts

In Standard Indian English (henceforth, SIE), root questions are formed by moving the wh-phrase to the left-periphery (Spec-CP) of the clause followed by, in non-subject extractions, the auxiliary (in Comp). Some examples are given in (5) below:

(5a) What$_i$ has$_j$ he $t_j$ eaten $t_i$?

(5b) What$_i$ *do* you want $t_i$?

(5c) [How much interest]$_i$ *did* they charge you $t_i$?

(5d) Why do you look worried?

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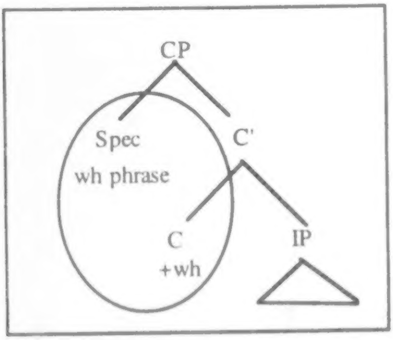
Embedded indirect questions in SIE also involves movement of the wh-phrase to the left-periphery (Spec-CP) of the embedded clause, without, however, any auxiliary following it (in Comp). Some examples are given in (6) below:

(6a) They know who$_i$ Vijay has invited t$_i$ tonight.
(6b) I wonder where$_i$ he works t$_i$.
(6c) I asked him what$_i$ he ate t$_i$ for breakfast.
(6d) Do you know where$_i$ he is going?

The well-known empirical generalization about data such as (5) and (6) is that Inversion is restricted to matrix sentences; it does not apply in embedded contexts. This generalization is expressed in the standard GB accounts (May 1985, Chomsky 1986, Rizzi 1990) in terms of Wh-Criterion, given in (7) and the relevant structural configuration shown in (8) below.

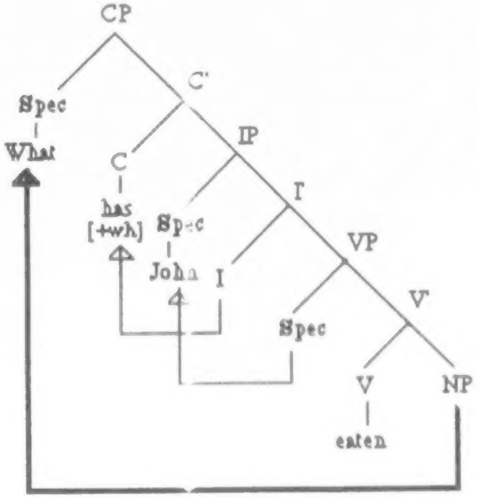
(7a) Each +wh $X^0$ must be in a Specifier-head relation with a wh-phrase.
(7b) Each wh-phrase must be in a Specifier-head relation with a +wh $X^0$.

(8)



According to the Wh-Criterion, the data in (5) and (6) are explained by assuming that INFL is specified [+wh] (see Rizzi 1990), and the role of inversion in matrix context is to carry the [+wh] feature to a position where it can satisfy (7a). In (5b), the [+wh] INFL is moved to C and the empty verb *do* is inserted to support the stranded INFL. In embedded questions the [+wh] feature is specified on the embedded C by the selection properties of the matrix verb. Wh-movement to the embedded Spec-CP satisfies (7b). Inversion is excluded since C is content-full (i.e., has [+wh], and therefore movement of INFL to C would violate the Projection Principle. In (9a) and (9b) below, I show the wh-movement operations in direct and embedded contexts.

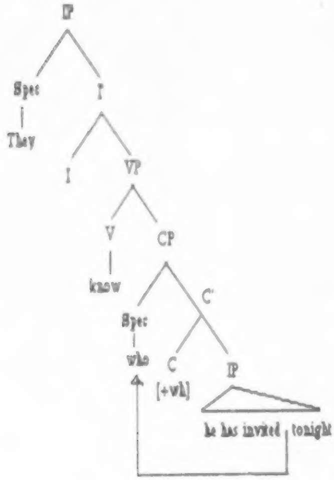
(9a)



In Indian Vernacular English (henceforth, IVE), on the other hand, root questions are formed also by moving the wh-phrase to the left-periphery (Spec-CP) of the clause. However, there is no auxiliary (in Comp) following the left-moved wh-phrase. Some examples are given in (10) below:

(10a) What$_i$ he has eaten $t_i$?
(10b) What$_i$ you want $t_i$?
(10c) [How much interest $_i$ they charged you $t_i$?
(10d) Why you look worried?

(9b)



The embedded (Indirect) questions in IVE involves wh-movement to the left-periphery (Spec-CP) of the embedded clause. The wh-phrase, surprisingly, is followed by the auxiliary, i.e., wh-movement in embedded contexts is accompanied by auxiliary movement (inversion) to, presumably, Comp. The relevant data is given in (11) below:

(11a) They know who$_i$ has$_j$ Vijay $t_j$ invited $t_i$ tonight.

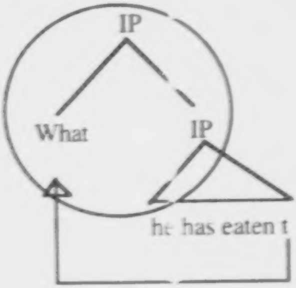
(11b) I wonder where$_i$ does he work $t_i$.

(11c) I asked John what$_i$ did he eat $t_i$ for breakfast.

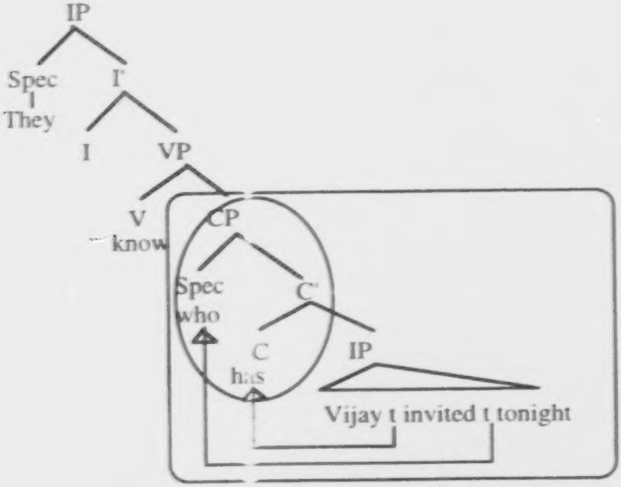
(11d) Do you know where$_i$ is$_j$ he $t_j$ going $t_i$?

The simple empirical generalization that emerges from data in (10) and (11) is that in IVE, inversion is restricted to embedded questions; it does not apply in matrix questions. The interesting empirical fact is that the question formation strategy in IVE is just the mirror image of that in SIE. Following the work of Déprez (1991) and Bakovíc (1995), I will assume that XP-movements that require a following head are movements to Specifier, while all other movements are adjunctions. The relevant structural configurations for questions in IVE are given in (12a) and (12b) below:

(12a) Adjunction


IP
What
IP
he has eaten t

(12b)Inversion


IP
Spec
They
I'
I
VP
V
know
CP
Spec
who
C'
C
has
IP
Vijay t invited t tonight

Given (10), (11) and (12a,b), it is not possible to maintain the Wh-Criterion (cf. 7a,b, above) for the following reasons:

(13a) Adjunction data (10a-d) do not follow from the Wh-Criterion—violates (7b).
(13b) Inversion data (11a-d) violates the Projection Principle.

Given the standard GB account, the grand prediction is that the data such as given in (10) and (11) above are simply not English. In the next section, I present more data from IVE that is problematic for the standard GB-theoretic accounts.

## 4.2. Pro-Drop

With respect to argument pro-drop, SIE works like other regional standard British and American varieties: Finite clauses without subject are disallowed, as shown in (14a) and (14b) below:[6]

(14a) ****pro*** dances well.
(14b) *He said that ***pro*** would come tomorrow.

There are numerous reports in the literature linking pro-drop to rich agreement. In other words, there seem to be a general association between subject (pro) drop and rich (person, number, gender) agreement (=Licensing). The agreement affixes can recover the phi-feature (person / number / gender) content of the dropped subject (=Identification). Languages which have rich subject-agreement morphology, like Spanish, Italian, and Hindi allow pro-drop, whereas SIE, as well as other standard English varieties, has impoverished agreement morphology, and, therefore, does not allow pro-drop.[7]

Under the standard GB account (cf., Rizzi 1986, Jaeggli and Safir 1989), there are two requirements for pro-drop. The first is the "Licensing" requirement; that Pro-drop is allowed if that position is Case-governed by a "licensing" head, which can vary from language to language. Thus, INFL is a licensing head in

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[6] Mufwene (1988) discusses several instances in casual speech style of English where subject pro-drop is possible, e.g., 'Just stopped by to say hello!'

[7] Chinese is an exception to this generalization: it has no agreement morphology, and yet is allows empty categories. According to Huang (1984), Chinese uses a different mechanism to license pro: it is variable bound to a zero topic.

Spanish, but not in English, and therefore pro-drop is not "licensed" (possible) in English. The second requirement is the "Identification" requirement; that the content of the pro must be fully recoverable. One way to achieve identification is when pro is coindexed with features of person and number on its Case-governing head. Again, the impoverished English Agr is unable to identify/recover the content of pro. These two requirements, licensing and identification, predict the ungrammaticality of (14a) and (14b).

The pro-dropping facts of IVE are interesting. IVE, like Spanish and Italian, allows pro-drop, as shown in (15a), (15b), and (15c).[8]

(15a) He played cricket all day today — and now *pro* does not want to work on his homework!
(15b) Subject and Object pro-drop
A: You got tickets?
B: No, *pro* sold *pro* already.
(15c) A: Is he in his office?
B: Sorry, *pro* left just now only.

The data in (15) pose two empirical problems to standard GB account. The first problem is that like SIE, IVE is morphologically impoverished, and therefore should not license pro-drop; but it does. It is possible to stipulate that INFL in IVE is a licensing head, just as in Spanish. This stipulation, however, is fraught with empirical problems. Unlike Spanish and Italian, IVE does not have Subject-Verb inversion, e.g., '*Speaks he.' Further, unlike Spanish and Italian, IVE does not show any trace of *that-t* effects. Thus, sentences such as 'who did you say that came' in IVE are ungrammatical, although similar sentences in Spanish and Italian are not. The second problem is that IVE does behave like Spanish and Italian in that it does not require semantically empty subjects (discussed in next subsection).

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[8] Platt at al. (1984) discuss similar data for Malaysian and Hong Kong English, as shown below:
(a) Dis Australians, you see dem hold hand hold hand, honey here, honey there, darling here, darling dere, next moment *pro* separated already.
(b) If you don't like *pro*, yaya (nursemaid) will give you water.
(c) In Australia, people never carry umbrella — so if you carry *pro* they will laugh at you.

Although the pro-dropping facts in IVE do not follow standard explanations of Licensing and Identification, on closer examination we notice that the absence of an overt subject in IVE is not free — it is required when the subject is coreferential with the discourse topic (cf. Huang 1984, Grimshaw & Samek-Lodovici 1995). Briefly, discourse topic here is defined as what the sentence is all about. The distribution of pro-drop in IVE is similar to Italian as argued in Samek-Lodovici (in preparation) and Grimshaw & Samek-Lodovici (1995). Compare the Italian data in (16) and the IVE data in (17):

(16) Q: E' partita [la madre di Gianni]?
Did John's mother leave?
A: Si, ***pro*** /*lei e' partita
Yes, (she) left.

(17) A: Is he in his office?
B: Sorry, ***pro*** left just now only.

In Italian (16), as argued by Grimshaw & Samek-Lodovici (1995), pro-dropping is restricted to those arguments which are topic-connected. Topic-connected arguments must obligatorily drop. In IVE (17), however, where in B's response the subject is (referring to) the topic, it can optionally be dropped. The generalization, then, for pro-dropping in IVE is that pro-drop is restricted to those arguments (subject/objects) that are topic-connected. The difference between Italian and IVE is that in the former, topic-connected arguments drop obligatorily, whereas in IVE the dropping of topic-connected arguments is only optional.

### 4.3. Null Expletive (*it*) Subjects

Turning now to null expletive subjects, SIE requires dummy subjects in finite clauses, as shown in (18a) whereas IVE does not require dummy subjects in finite clauses, as show in (18b).

(18a) ****pro*** is clear that he will not come.
(18b) Here ***pro*** is not safe to wait.

Under the standard account (18a) is ungrammatical due to the violation of formal "licensing" and "identification" requirements. The grammaticality of (18b) has no account under "licensing" and "identification" requirements (cf., Sells, Rickford & Wasow 1994).

## 5. Optimality Theory — A Description

The starting point in our discussion of the framework is the overall rationalist approach in which Optimality Theory (henceforth, OT) is grounded. The rationalist approach is premised on the assumption that grammatical intuitions provide privileged access to the system underlying language performance. Under this approach, the collection of the grammatical judgments of the "idealized native speaker/hearer" represents linguistic competence — the knowledge which underlies the use of language. The idealization, of course, and unfortunately, leaves no room for language variation, or its account thereof. And further, when linguist's introspection conflicts with actually observed utterances, the former prevails in the construction of grammars.

Although OT is rationalist in spirit, it departs from the traditional frameworks in its ability to accommodate linguistic variation, as will become clear momentarily. OT differs from orthodox rule/principle-based approach (à *la* Chomsky 1965, 1981, 1995) in the manner discussed below.

Optimality theory (Prince and Smolensky 1993) is about how grammars are defined by constraint hierarchies (McCarthy 1995). Universal Grammar in OT is expected to provide a finite set of potentially conflicting (violable) constraints on structural well-formedness. Languages differ from each other in terms of how each ranks the set of violable constraints. Thus, in essence, different configurations of constraint ranking yield, in principle, different grammars, as shown schematically in (19). If so, it follows that minimally different constraint rankings will give rise to dialect variation, theoretically. Adopting OT thus provides a mechanism to faithfully account for the subtle grammatical differences between SIE and IVE, without risking empirical coverage.

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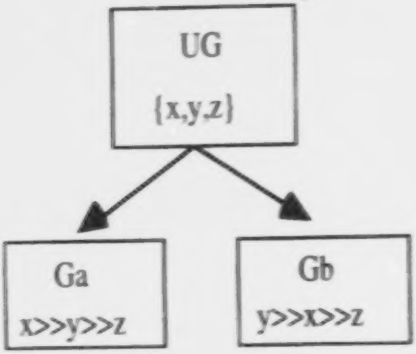
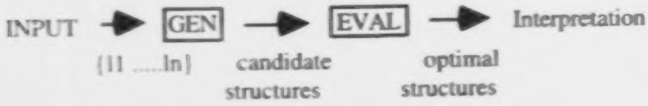
(19)



OT, instead of using categorical constraints to express empirical generalizations, uses "violable" (soft) constraints. These soft constraints are violable in just those contexts in which they conflict with a higher ranked constraint. The core ideas of OT can be summed up in the following way: constraints can be violated; constraints are ranked; and the optimal form is grammatical. Generative grammar consists of ranked constraints which examine (via *Eval*) all possible candidate structural descriptions freely generated by input-output function (*Gen*). This is illustrated in (22) below.[9] The output that has the least violations (=0, in the best case scenario) is optimal, i.e., grammatical.

(20) OT Grammar:



Before I close the discussion in this section, let me give an illustration of how OT accounts for language variation (cf., also Anttila (1995)): Consider two grammars, Grammar *A* and Grammar *B*, both of which have three constraints {x, y, z}.

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[9] This diagram is taken from one of the handouts of the talk given at the MIT-OT workshop in May 1995. Regrettably, I have lost the handout, and the reference of the speaker.

Assume further, that in Grammar *A* these constraints are ranked in such a way that {x} dominates {y} dominates {z} [= x >> y, y >> z, x >> z ]. In other words, Grammar *A* imposes a total order on the constraints: x >> y >> z. Now, assume that for a certain input we get two competing output candidates: *cand 1* and *cand 2*. Tableau 1 shows the competition between the two candidates. *Cand 1*, violates the highest ranking constraint {x}, which is lethal. Grammar *A*, therefore, chooses *cand 2* straightforwardly as the optimal, grammatical, option.

Tableau 1: output = *cand*$_2$

| Candidates | | | x | y | z |
|---|---|---|---|---|---|
| a. | | *cand*$_1$ | *! | | * |
| b. | ⇒ | *cand*$_2$ | | * | * |

Now consider the other grammar, Grammar *B*. Assume that it, too, has the same three (universal) constraints {x, y, z}, however, this grammar imposes slightly different ordering, viz., the constraint {y} dominates {x} dominates {z}. Now for the same input, as in Grammar *A* , we get the same two candidate competing outputs: *cand 1* and *cand 2*. The optimal output, as shown below in Tableau 2, is *cand 1*, because in this grammar *cand 2* violates a higher ranked constraint {y}, leading to its rejection as optimal.

Tableau 2: output = *cand*$_1$

| Candidates | | | y | x | z |
|---|---|---|---|---|---|
| a. | ⇒ | *cand*$_1$ | | * | |
| b. | | *cand*$_2$ | *! | | * |

In the next section I will propose a set of potentially conflicting meta-linguistic constraints and show how their interactions yield well-formed utterances in both SIE and IVE.

## 6. The OT Account

I now present the analysis of the data following Labov (1972a) who has argued that (syntactic) variation is usually not free or indeterminate; it can often be shown to be systematic. In that spirit, I propose, following Sells, Rickford and Wasow (1994, 1996), the (universal) constraints listed in (21) to account for the syntactic variation discussed in section 4.0.

(21a) **OP-SCOPE**: Operators (e.g., wh-phrase) must take scope over the entire proposition (=c-command VP/IP at S-Structure).
(21b) **OP-SPEC**: Operators must be in Specifier position.
(21c) **STAY**: No movement (=trace) is allowed.
(21d) **OB-HD**: Heads of selected projections must be filled (either by trace or overt material)
(21e) **SUBJECT**: The canonical subject position (=highest A-Specifier in an "extended projection" (Grimshaw 1991) must be filled. (=EPP, *à la* Chomsky 1981, but violable).
(21f) **DROP TOP**: Leave arguments coreferent with the topic structurally unrealized.
(21g) **PARSE**: Parse input constituents
(21h) **FULL INT**: Parse lexical conceptual structure. (Failed by expletives and auxiliary do)

Before I show how these constraints interact to yield the syntactic differences between SIE and IVE, a couple of theoretical assumptions need to be explicitly stated. First, the constraints listed in (21) are not necessarily 'surface-true'; this is expected since the constraints which are always surface-true are going to be those which either do not conflict with any other constraint, or are always victorious in any conflict by virtue of the fact that they are always ranked higher than those with which they conflict (Grimshaw 1994).

Second, and importantly, the constraints listed above in (21) are universal; the grammar of every language has them and that all rankings of them are possible. This assumption follows a central meta-principle of OT, called UNIV, which says that constraints are universal. The constraints listed under (21) have been extensively discussed in the OT literature (cf., Sells, Rickford & Wasow (1994, 1996), Grimshaw (1994), Grimshaw & Samek-

Lodovici (1995), Smolensky et al. (1995), Bakovíc (1995), and Samek-lodovici (in preparation)).

### 6.1. Matrix (Direct) Questions

Beginning with the matrix questions in SIE and IVE, we need to deal with the problem of Inversion vs. Adjunction, i.e., whereas SIE allows subject-verb inversion, IVE does not. In the discussion of questions, OP-SCOPE will not appear in the tableaux because it is inviolable in both SIE and IVE. This constraint forces wh-phrase to move to a position from which it can c-command the entire proposition (=IP) at S-Structure. The constraints that need to be recruited to yield direct questions are: OP-SPEC and STAY. The interaction of these two constraints in the order given in (22) yields the categorical prediction of direct questions in SIE: the wh-phrase in CP-Spec followed by an aux in Comp. The tableau in (23) shows a competition between two candidates, an adjunction structure and an inversion structure. Both violate the low ranking constraint STAY, and therefore STAY remains inactive on the candidate set. Since adjunction violates OP-SPEC, a higher ranked constraint, while inversion does not, inversion structure is more harmonic, and wins.

(22) SIE: **OP-SPEC >> STAY**

(23) Tableau: SIE

| Candidates | | OP-SPEC | STAY |
|---|---|---|---|
| adj | What you would like to eat *t* ? | *! | * |
| inv ⇒ | What would you *t* like to eat *t* ? | | ** |

Turning to IVE, recall that direct questions in IVE involve an adjunction structure, (12a) above; the wh-phrase adjoins to IP-Spec instead of moving to CP-Spec as it does in SIE. It turns out that both OP-SPEC and STAY yield the adjunction structure too, albeit with a different ranking. The IVE grammar ranks STAY over OP-SPEC (24, below), which gives the desired results (25). The tableau in (25) shows, again, two competing candidates, both violating the highest ranking constraint STAY. Notice however, the inversion structure incurs two violations of STAY — one by moving wh-phrase and the other by moving the Infl/Aux to Comp — as opposed to only one violation of STAY — moving wh-phrase — in the adjunction structure. In this competition, inversion loses because it incurs more violations than adjunction.

(24) IVE: **STAY >> OP-SPEC**

(25) Tableau: IVE

| | Candidates | STAY | OP-SPEC |
|---|---|---|---|
| adj ⇒ | What you would like to eat *t* ? | * | ▨ |
| inv | What would you *t* like to eat *t* ? | **! | ▨ |

The difference between the grammars of SIE and IVE, with respect to direct question formation, reduces to different rankings of the same constraints, which is expected in OT.

## 6.2. Embedded (Indirect) Questions

The generalization about indirect questions is: SIE does not permit inversion in indirect questions (=Noninversion), whereas IVE allows inversion in indirect questions (=Inversion). This grammatical distribution of inversion in the two varieties of English under consideration can be accounted for by the interaction of three constraints, two previously recruited to account for direct questions, viz., OP-SPEC and STAY, and a new one, viz., OB-HEAD.

Consider first SIE. Since SIE does not permit inversion in indirect questions, OB-HEAD must have a lower prominence vis-a-vis OP-SPEC and STAY. We have already established that the grammar of SIE ranks OP-SPEC over STAY (22, above). OB-HEAD, given its diminished status in SIE, must be ranked below STAY; the relevant ranking is given in (26).

The tableau (27) shows two competing candidates, both deferential to OP-SPEC. Since OP-SPEC cannot distinguish between the two candidates, the evaluation is passed on to the next important constraint, STAY. Again both violate STAY, but it is the inversion structure that incurs two violations of STAY as opposed to non-inversion structure which violates STAY only once. In this competition, then, non-inverted structure is harmonic, and wins.

(26) **SIE: OP-SPEC >> STAY >> OB-HD**

(27) Tableau: SIE

| Candidates | OP-SPEC | STAY | OB-HD |
|---|---|---|---|
| no-inv ⇒ I wonder what *e* he is eating *t* | | * | * |
| inv I wonder what is he *t* eating *t* | | **! | |

Turning to indirect questions in IVE, recall that these require inversion with wh-movement, suggesting that OB-HEAD is a constraint of high-prominence. Recall, too, that we have already established that in IVE STAY outranks OP-SPEC (24, above). By ranking OB-HEAD over STAY and OP-SPEC, as shown in (28), we get the desired output.

Once again, the tableau in (29) shows two competing candidates. The optimal output, given the dominance hierarchy in (28), is the inverted structure because the non-inverted structure violates OB-HEAD.

(28) **IVE: OB-HD >> STAY >> OP-SPEC**

(29) Tableau: IVE

| Candidates | OB-HD | STAY | OP-SPEC |
|---|---|---|---|
| no-inv I wonder what *e* he is eating *t* | *! | * | |
| inv ⇒ I wonder what is he *t* eating *t* | | **! | |

With respect to indirect question formation, the difference between the grammars of SIE and IVE reduces, again, to different rankings of the same constraints, which is only expected given that OT appeals to variation in ranking to provide different grammars.

### 6.3. Pro Drop

The empirical facts of pro-drop are straightforward: SIE, like other standard varieties of English does not permit pro-drop. IVE, on the other hand, allows pro-drop but it is restricted to those arguments (subject/objects) that are topic-connected. These different patterns of generalization can be expressed by letting three constraints — PARSE, DROP TOPIC, and SUBJECT — interact in different ways. Since SIE does not permit argument pro-dropping, it must be the case that PARSE (an argument) and SUBJECT are ranked higher in priority than DROP TOPIC. The non-pro-drop phenomenon in SIE follow from the dominance configuration given in (30).

As shown in tableau (31), candidate (b), which satisfies PARSE and SUBJECT is preferred over both candidate (a), which violates PARSE, and candidate (b), which violates SUBJECT. Thus the ranking PARSE above SUBJECT above DROP TOPIC yields the non-pro-drop generalization in SIE.

(30) **SIE: PARSE >> SUBJECT >> DROP TOPIC**

(31) Tableau: SIE

| Candidates | PARSE | SUBJECT | DROP TOPIC |
|---|---|---|---|
| (a) left just now only | *! | | |
| (b) ⇒ he left just now only | | | * |
| (c) left just now only he | | *! | * |

Turning to pro-drop in IVE, we find evidence of different ranking of the three constraints. Earlier, in (15a-c), we provided evidence that the grammar of IVE does not require an overt subject (or object) when it is topic-connected, which means that the constraint DROP-TOPIC must dominate PARSE and SUBJECT. In fact, the ranking configuration in (32) gets us the desired results. In tableau (33), we find that candidate (a) is the harmonic choice since the other two candidates incur violations of the highest ranked constraint, DROP-TOPIC.

(32) **IVE: DROP TOPIC >> PARSE >> SUBJECT**

(33) Tableau: IVE

| Candidates | DROP TOPIC | PARSE | SUBJECT |
|---|---|---|---|
| (a) ⇒ left just now only | | *! | |
| (b) he left just now only | *! | | |
| (c) left just now only he | *! | | |

With respect to the phenomenon of pro-drop, the difference between the grammars of SIE and IVE is reducible to different rankings of the same constraints.

## 6.4. Null Expletive (*it*) Subjects

Turning finally to null expletive subjects, we noticed earlier in (18) that SIE requires expletives in finite clauses whereas IVE does not require expletives in finite clauses. This difference follows from the interaction and satisfaction of two constraints, FULL INT and SUBJECT. We follow Grimshaw & Samek-Lodovici (1995) in assuming that an expletive is a regular pronoun with its lexical conceptual structure (at least partly) unparsed. Since SIE requires subject, even expletives in subject position, it must be the case that in this grammar SUBJECT outranks FULL INT, as shown in (34). In tableau (35), the candidate with the expletive in subject position (=IP-Spec) wins because it only violates FULL INT whereas the other candidate violates SUBJECT, a fatal violation, given the prioritized ranking in (34).

(34) **SIE: SUBJECT >> FULL INT**

(35) Tableaux: SIE

| Candidates | SUBJECT | FULL INT |
|---|---|---|
| *pro* is clear that he will not come | *! | |
| ⇒ It is clear that he will not come | | * |

In IVE on the other hand, expletives can be dropped from subject position. This generalization can be captured by re-ranking the two constraints, SUBJECT and FULL INT in such a way that FULL INT outranks SUBJECT, as shown in (36). The tableau in (37) shows that in IVE an optimal candidate will satisfy FULL INT at the expense of violating SUBJECT.

(36) **IVE: FULL INT >> SUBJECT**

(37) Tableaux: IVE

| Candidates | FULL INT | SUBJECT |
|---|---|---|
| ⇒ *pro* is clear that he will not come | | * |
| It is clear that he will not come | *! | |

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To sum up, with respect to null expletives, the interaction of two constraints, FULL INT and SUBJECT, yields the distributio- nal differences between SIE and IVE.

## 7. Conclusions

The success of (socio)linguistic theory depends largely, I believe, in its ability to demonstrate the systematic nature of language variation and use. In this paper I have argued that the mechanism of constraint interaction and satisfaction, as conceptualized in OT, allows for a straightforward account of English language variation in India. In OT, UG is conceptualized as a set of potentially conflicting constraints holding in all languages, with cross-linguistic variation arising from the fact that different languages, language varieties resolve the conflicts among these constraints differently.

I have presented evidence to claim that the differences between the observed patterns of generalization in SIE and IVE are best accounted for in a conceptualization of grammar that is based on a general notion of priority. This OT-theoretic conceptualization allows us to capture the intuition that the grammatical constraints that govern the syntactic behavior of IVE are *not* unique to it. Specifically, in section 6, I have shown that the difference between the grammars of SIE and IVE is reducible to different rankings of the same constraints, which is only expected given that OT appeals to variation in ranking to provide different grammars.

Given the logic of the argument, that variation in constraint ranking yields different grammars, and the evidence presented in sections 4 and 6 to support it, it does not seem plausible to maintain the "deviation from the norm" hypothesis of Quirk (1988, 1989, 1990; cf., also Prator 1968) to account for variation in Indian English.

Finally, I believe that studies on language variation, such as this one (cf. also Sells, Rickford and Wasow 1994, 1996, Rickford et al. 1994, Mesthrie 1992), show ways in which sociolinguistic theory and current syntactic theorizing can inform and enrich each other.

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# The Truth about Codeswitching in Insular Acadian[1]

Ruth King and Terry Nadasdi

## 1. Introduction

Most recent research on codeswitching is conducted from one of two perspectives. The search for grammatical constraints on intra sentential codeswitching exemplifies the grammatical perspective (e.g. DiSciullo *et al* 1986 Poplack 1989; Belazi, Rubin & Toribio 1994; Mahootian & Santorini 1996; Myers-Scotton 1993) while the study of the social meaning of particular codeswitches exemplifies the interactional perspective (e.g. Gumperz 1982; Heller 1982, 1994). The present article concentrates instead on the role of codeswitching in the organization of discourse, specifically, with how codeswitching figures in the expression of evidentiality in French-English bilingual discourse. Following Auer (1995), we would argue that codeswitching can be analyzed at the level of discourse relatively independently of any grammatical properties of codeswitching and the immediate social context in which it is embedded. We do turn to consideration of the sociolinguistic situation in order to explain inter- and intracommunity variation.

## 2. Speech Corpus

Our study is concerned with codeswitching in three Atlantic Canada Acadian communities, two in Prince Edward Island, Abram-Village and Saint-Louis, and one in Newfoundland, L'Anse-à-Canards. All three are small fishing villages with fewer than five hundred residents. A sociolinguistic interview corpus for 24 Abram-Village residents and 20 Saint-Louis residents comprising a total of just over 800,000 words provides the main data for the study; a subsample of our L'Anse-à-Canards corpus, interview data for 8 residents, consisting of just over 100,00 words, was used for comparative purposes. All of the speakers we looked at are fluently bilingual. While the grammars of the three varieties are the same for those linguistic features relevant for the study, the relative prestige of French differs in the three communities, as does the degree of contact with English. L'Anse-à-Canards is located in an isolated area of Newfoundland where there was little contact with English before the second world war.[2] Until quite recently, education in French has been negligible and consequently the standard variety has exerted little influence on the local dialect. Elsewhere we have shown that it is one of the most conservative Acadian varieties, from the perspective of influence from English and influence from the standard (cf. King & Nadasdi, 1996). The two Prince Edward Island varieties have been in closer contact with English, for a longer period, but there are striking differences between the two communities. Abram-Village is located in a small enclave in Prince Edward Island where French is the majority language locally, although it is in a minority position in the province as a whole. There is strong institutional support for French and our sample here includes speakers with some control of the standard as well as of the local variety. Saint-Louis, on the other hand, is surrounded by English villages, there is little institutional support for French, and lack of transmission of the language to the young is a serious problem faced by the community. Speakers of Saint-Louis French have had more exposure to English but less exposure to Standard French than have their counterparts in Abram-Village. We will return to intercommunity variation below.

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[1] We wish to thank Gary Butler for discussing some of the data with us and Susan Ehrlich and Monica Heller for suggesting some important references.

## 3. Switched Forms

We were initially struck by codeswitches such as those found in (1)-(3). Note that the matrix language is French.

(1) **I guess** qu'on est pas mal tout pareil. (19.2A.255, Abram-Village)
"I guess that we are just about all equal."

---

[2] See King (1989, 1994) and King and Nadasdi (1996) for more detailed discussion of the sociolinguistic situation in the three communities.

(2) **I think** j'ai plus peur des chenilles qu'une serpent. (30.2A.47, Saint-Louis)
"I think (that) I'm more afraid of caterpillars than a snake."

(3) **I don't know** quoi ce-qu'a arrivé, moi. (29.1B.269, Saint-Louis)
"I don't know what happened."

In the Prince Edward Island corpora one finds codeswitches such as *I guess, I imagine, I think, I bet,* and *I'm sure* with French *that*-clause complements. One only finds tokens with the first person singular pronoun: that is, one does not find examples such as (4), with a first person plural pronoun, or (5), with a lexical NP as subject.

(4) * We guess qu'on est pas mal tout pareil.
"We guess that we are just about all equal."

(5) * Marie doesn't know quoi ce-qu'a arrivé.
"Marie doesn't know what happened."

In addition to the matrix clause use of English codeswitches, we find widespread use of *I think, I guess, I imagine,* etc. at the "edges" of sentences. Examples of such bracketing are given in (6)-(8):

(6) Ils avont pas mal de la misère, **I guess.**
"They are having a hard time, I guess." (01.1B.407, Abram-Village)

(7) J'étions une quarantaine, **I suppose**, une quarantaine.
"There were about forty of us, I suppose, about forty." (30.1A.108, Saint-Louis)

(8) C'est sept ou huit heures, je sais pas, huit heures, **I imagine**.
"It's seven or eight hours, I don't know, eight hours, I imagine." (33.1B.810, Saint-Louis)

Furthermore, we also find intersentential codeswitching, as illustrated in (9) and (10):

(9) Speaker A: Les Français alentour d'icitte s'accordont bien?
Speaker B: **Bien, I guess so.**
Speaker A: Ils travaillont ti ensemble?
Speaker B: Oui, oui. (27.1B.208, Saint-Louis)

(Speaker A: (Do) the French around here get along well?
Speaker B: Well, I guess so.
Speaker A: Do they work together?
Speaker B: Yes, yes.)

(10) Speaker A: Les traditions de la communauté comme la râpure puis les fricots puis toute ça, c'est ti de quoi qui va rester avec les jeunes?
Speaker B: Ah oui! Je crois quasiment, je crois quasiment que oui. **I think so**. Je sais pas. (19.2B.273, Abram-Village)

(Speaker A: Community traditions like "râpure" and "fricot" and all that, is that something that is going to stay with young people?
Speaker B: Oh yes! I believe pretty much so, I believe pretty much so, yes. I think so. I don't know (for sure).)

While our primary focus will be on matrix clause and edge-type codeswitches, it is worth noting that there are no striking differences in verb choice in single-clause utterances.

Sentence (11) gives a list of English verbs used, in order of frequency:

(11) *English verbs employed in codeswitches*:
guess, think, don't know, don't think, imagine, hope, believe, suppose, be sure, bet, can't see, wish

The verbs in (12) are examples of high-frequency English verbs not found in codeswitches:

(12) *Examples of high-frequency English verbs not employed in codeswitches*:
say, tell, ask, remember, show, explain

## 4. The Expression of Evidentiality

Regardless of the syntactic position occupied, we found that the choice of verb is semantically constrained: codeswitches occur with a particular class of evidentials, verbs of opinion or belief. We did not find such codeswitches with other classes of verbs which take *that*-clause complements in English (cf. Partee 1973), such as verbs of communication (*say, tell, explain*, etc.), verbs of inference (*prove, show, discover,* etc.) or emotives (*be sad, be glad, hate*, etc.) Thus we do not find examples like *I said que, I showed que*, etc.

We do find what might appear to be exceptions to the general semantic pattern. There are several tokens with *I hope* and one with *I wish*, exemplified in (13) and (14). These would not normally be classed as verbs of opinion or belief, but they are opinion-related: in both cases the verb expresses a desire for the proposition in the embedded clause to be realized. In other words, they give an opinion about unrealized virtual events.

(13) Il va venter de soir. **I hope** qu'il vente pas trop à cause les pêcheux sont là. (10.1B.498, Abram-Village)
"It's going to be windy this evening. I hope that it's not too windy because the fishermen are (out) there."

(14) **I wish** ça serait trois heures. (14.2B.822, Abram-Village)
"I wish (that) it were three o'clock."

Close analysis of the surrounding text leads us to suggest that in many cases the codeswitches serve to mitigate the speaker's relationship to the proposition expressed in the embedded clause. In (15) the local interviewer asks the informant, a middle-aged Saint-Louis male, about his father's seeing the ghost of his first wife:

(15) Speaker A: Ç'a ti ienque arrivé une fois ou - ?
Speaker B: Bien... **as far as I know**, oui.
Speaker A: Mmhmm. Il était ti marié là dans ce temps là... à sa deuxième femme?
Speaker B: **I guess** qu'il était marié avec la deuxième femme. **I think** qu'il était marié then. (39. B.532-534, Saint-Louis)

(Speaker A: Did that happen only once or - ?
Speaker B: Well...as far as I know, yes.
Speaker A: Mmhmm. Was he married then...to his second wife?
Speaker B: I guess he was married to the second wife. I think he was married then.)

The interviewer asks if it happened just once. The informant responds, in English, "as far as I know". The interviewer then asks whether the informant's father was married to his second wife at the time. The informant responds that he *guesses* his father was, that he *thinks* he was remarried then. Here, uncertainty as to the truth of the proposition is highlighted by the switch to English.

In (16), on the other hand, the informant's belief in the truth of the proposition expressed in the embedded clause is emphasized by the codeswitch:

(16) Speaker A: Moi, je sais qu'on peut avoir de la fun pareil parce que j'en ai l'expérience parce que, je disais, comment j'avais fait ma folle puis chanté puis toute ça, puis je prends pas une drink! Ça fait, toujours trois ans, at least. Bien avant, c'est pas à-cause j'en prenais beaucoup, j'en prenais justement une petite social drink. Bien je m'ai, je m'ai juste décidé, ça, pour, des certaines raisons, oui, que j'allais juste jamais en toucher back de ma vie.
Speaker B: Mmhmm.
Speaker A: Puis, je touche pas à un petit wine, rien, rien.
Speaker B Non.
Speaker A: Puis des fois, bien j'ai assez folle, ah, tu sais, je m'enjoye assez, je vas à une danse, je danse assez, bien **I'm sure** qu'il y en a qui disont <<tu bois en cachette>>. Ils voulont pas me croire, bien, c'est pas vrai. (06.2B.186-190, Abram-Village)
(Speaker A: Me, I know you can have fun anyway because I've had the experience, because, like I was saying, how I played the fool and sang and all that, and I don't have a drink!

That's three years, at least. Well before, it wasn't that I drank a lot, I used to have a little social drink. Well, I just decided, that, for, certain reasons, yes, I was never going to touch any again for the rest of my life.

Speaker B: Mm hmm.
Speaker A: And I don't (even) have a little wine, nothing, nothing.
Speaker B: No.
Speaker A: And sometimes, when I'm acting the fool, ah, you know, I'm really enjoying myself, I go to a dance, I dance a lot, well I'm sure that some say "you drink in secret". They don't want to believe me, well, it's not true.)

In this case, the informant, a middle-aged Abram-Village woman well-known in the community as the life of the party, declares that she no longer takes a drink, ever. But, she says, she's *sure* there are some who think she drinks in secret, although she has no evidence to that effect. The two cases are linked, then, because opinions or beliefs are involved, as is uncertainty.

We took into consideration the various meanings which could be conveyed by the English verbs in question. For instance, we found no examples where *guess* might be paraphased as "predict", as in (17), or where *think* might be paraphrased as "reflect", as in (18).

(17) *I guessed que ça serait un problème.
"I guessed that it would be a problem."
(18) *I think about ça souvent.
"I think about that often."

These lacunae lend support to our analysis of the discursive function of the codeswitches, i.e., they are used to underscore a speaker's personal opinion about something or indicate their uncertainty as to the veracity of a statement. But is codeswitching the only means for indicating this kind of uncertainty? To explore this question, we turn to data for five heavy codeswitchers and compare their use of *I guess* and *I think* with what might be considered French-language equivalents. In the course of doing so, we hope to answer the question of whether or not these forms really are equivalents.

## 5. French-language Equivalents

We begin with potential equivalents for *I guess* as used in (19) and (20) which, at least among the heavy switchers of our corpora, is the indicator *par excellence* of uncertainty:

(19) **I guess** la tide était trop haute. (30.2B.119, Saint-Louis)
"I guess the tide was too high."

(20) **I guess** je devrais parler en français. (29.1B.376, Saint-Louis)
"I guess I should speak French."

In these sentences, and indeed in the vast majority of sentences of this type, *I guess* indicates to the listener that the speaker is taking a stance on the veracity of the following proposition; however, she is extremely uncertain. Can this same degree of uncertainty be rendered by a French equivalent? Potential candidates for equivalents of *I guess* include the forms in (21):

(21) **Potential French-language equivalents for** *I guess*:
*je crois (que), je pense (que), me semble (que), à moi, j'imagine (que), peut-être (que)*

The first four forms certainly allow the speaker to take a stance on the veracity of a statement or event. However, the degree of certainty indicated by these forms is quite strong. They are used when the speaker wants to indicate that she is fairly certain that a proposition is or is not true and they indicate a degree of certainty greater than that indicated by *I guess*. One might be able to argue that *j'imagine* indicates a high degree of uncertainty, similar to that indicated *by I guess*; however, it is not used by our heavy code-switchers. As for *peut-être* (generally translated as "maybe"), it succeeds in letting the listener know that the speaker is uncertain, but it involves pure conjecture and entirely releases the speaker from taking a stance on the veracity of the statement. It would appear, then, that *I guess* fulfills an intermediate role: it indicates that the speaker does in fact take a stance as to the veracity of a proposition; however, the stance is extremely weak, much weaker than any potential French language equivalent. As such, switching to *I guess* enables the speaker to indicate a degree of uncertainly previously unuanced in the language.

What about forms such as *I think*? Close examination of the data indicates that, unlike the case for *I guess*, there is no strong evidence that a switch to *I think* indicates a greater degree of uncertainty than the equivalent forms in (22):

(22) **Potential French-language equivalents for** ***I think***:
*je pense que, je crois (que), je trouve (que), je dirais (que), me semble (que), à moi*

Note first of all that *je pense que* seems to be absent from the heavy codeswitchers' inventory of terms used to indicate uncertainty. However, the other forms do occur and seem to be interchangeable with *I think*. So, for example, the meaning of the main clause of the sentence in (23)a seems the same as that of (23)b:

(23) a. **I think** que c'est ça qu'arrive. (30, Saint-Louis)
"I think that's what happens."
b. **Je crois** que c'est ça qu'arrive. (30, Saint-Louis)
"I believe that's what happens."

There may, however, still be reason to believe that they are not absolute equivalents. Consider now the data in Table 1 which compares propositions which follow *I think* and the French equivalents and which involves cases where a speaker takes a stance on the veracity of a statement. The kinds of propositions we are interested in fall into two basic categories: a) events/facts accomplished in the past and b) unaccomplished events which are hypothetical or ongoing. Examples of these two categories are presented in (24) and (25).

(24) *Accomplished events/facts*:
a. **Je crois** qu'elle avait sixty-five. (30, Saint-Louis)
"I believe she was sixty-five."
b. Elle m'avait demandé pour un hanger une journée puis **I think** que j'ai été lui quérir des clothes pins. (29.1B.24$^5$, Saint-Louis)
"She had asked me for a hanger one day and I think I went to look for some clothes pins for her."

Table 1: Distribution of **I think** and French-language equivalents, selected speakers

| Verb | Accomplished Events | Unaccomplished Events |
|---|---|---|
| *I think (que)* | 12 (20%) | 48 (80%) |
| *je crois (que)* | 82 (54%) | 66 (46%) |
| *me semble (que)* | 51 (51%) | 49 (49%) |
| *je pense (que)* | 0 | 0 |

(25) *Unaccomplished, current or hypothetical events/facts*:

a. **I don't think** que je pourrais vivre comme une femme qui serait amarrée à la maison. (30.3B.134-135, Saint-Louis)
"I don't think that I could live as a woman who would be tied to the house."

b. **Me semble** ça devrait être un homme qui serait un prêtre à cause le bon Dieu était un homme. (31, Saint-Louis)
"It seems to me (that) it should be a man who should be a priest since God was a man."

Table 1 provides results for how often a speaker's degree of uncertainty is indicated by codeswitches with *I think*, and how often it is indicated by French-language equivalents for both categories of information. These numbers include all types of codeswitches, i.e., matrix clauses, edges, and single-clause utterances.

What these results reveal is that while all forms can be used to indicate a speaker's opinion relative to the veracity of both accomplished events and unaccomplished events, *I think* is used primarily for this latter category of information. The French equivalent forms are evenly distributed across accomplished and unaccomplished events. In other words, the English form is used first and foremost to take a stance on information the veracity of which, by its very nature, is relatively uncertain. What we would like to argue, then, is that when one uses a French-language equivalent, confidence in the veracity of a statement is still appreciably greater than when a stance on information is introduced by an English codeswitch.

So while *I think* and its French equivalents can be used in the same context, it is not obvious that they are absolute equivalents. A codeswitch to *I think* underscores a speakers' uncertainty vis-a-vis a proposition: it indicates to the listener that the uncertainty is greater. In other words, whenever a French equivalent is used, the speaker could have used an English codeswitch to underscore the uncertainty. Example (10) above, repeated here as (26), is a nice example of this.

(26) Speaker A: Les traditions de la communauté comme la râpure puis les fricots puis toute ça, c'est ti de quoi qui va rester avec les jeunes?

Speaker B: Ah oui! Je crois quasiment, je crois quasiment que oui. **I think so**. Je sais pas. (19.[illegible]B.273, Abram-Village)

(Speaker A: Community traditions like "râpure" and "fricot" and all that, is that something that is going to stay with young people?

Speaker B: Oh yes! I believe pretty much so, I believe pretty much so, yes. I think so. I don't know (for sure).)

Here we see that the informant comments on whether the old traditions, in this case traditional Acadian dishes, will be retained by the young. He comments in French that "he believes, pretty much so". Then he says, "I think so. Je sais pas". We interpret this as a decrescendo from fairly certain (*je crois*) to relative uncertainty (*I think so*), to absolute uncertainty (*je sais pas*).

## 6. Why Codeswitch?

We now consider the process of "infiltration" of the switches to English. Table 2 presents the full set of English opinion-related verbs which occurred in matrix clauses and in other contexts; we have combined our "edge" category with our "single-clause utterance" category here.

We found a total of around 600 tokens with switches to English. The low frequency of the structure might at first appear surprising: indeed, if we had not done quantitative analysis of

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large corpora we would not have identified the data as constituting a pattern. However, it must be kept in mind that the linguistic expression of attitudes arising through opinion or belief is not as frequent as one might expect in discourse: Chafe (1986:266) reports just 3.6 occurrences per 1000 words in conversational written English. Given that our corpus is approximately 900,000 words, our English data amount to, relatively speaking, about a fifth of the proportion found by Chafe. When one considers that our informants vary in terms of the degree with which they employ English switches, and that almost everyone has *some* examples of *je crois, me semble*, etc. that can be characterized as opinion-giving, our results are not out of line.

Looking at all three corpora, we find that the most frequently-occurring English verb is *guess*, which, as we have mentioned, is the indicator of uncertainty about information *par excellence*. Of those informants whose speech exhibited the phenomenon, more than 85% had *guess* (as their only English verb or as one of their verbs) in matrix clauses. The pervasiveness of *I guess* suggests that in communities where its use is widespread, it was the first form used to underscore a speaker's uncertainty. As previously suggested, we believe that the switch to *I guess* came on the scene to allow the speaker to indicate a nuance of uncertainty that was previously not distinguished. Developments of this type certainly have a precedence in language contact situations, though documented cases involve borrowed forms rather than codeswitches. For example, Poplack, Sankoff and Miller (1988) suggest that the borrowing of *cute* in Quebecois French originated from a desire to nuance between different registers; Nadasdi (1991) also gives examples of this type. However, the case we have presented is unique in as much as it is not only the English form that allows the speaker to indicate a greater nuance in meaning, but the actual codeswitch itself, especially with codeswitches involving forms other than *I guess*.[3]

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[3] Maschler (1994) also makes this second point regarding the use of English discourse markers (e.g., *so, but, you know*) in English-Hebrew codeswitching, i.e. "[a] verbal activity is marked not only by the presence of a discourse marker, but also by moving to another language."

Table 2. English verbs used in codeswitches

| | Saint-Louis | | Abram-Village | | L'Anse-à-Canards | |
|---|---|---|---|---|---|---|
| **Verb** | Matrix | Elsewhere | Matrix | Elsewhere | Matrix | Elsewhere |
| am sure | 3 | 0 | 1 | 0 | 0 | 0 |
| believe | 4 | 2 | 0 | 0 | 0 | 0 |
| bet | 2 | 2 | 0 | 0 | 0 | 0 |
| can't see | 1 | 0 | 0 | 0 | 0 | 0 |
| doubt | 0 | 0 | 0 | 1 | 0 | 0 |
| guess | 98 | 85 | 23 | 97 | 17 | 69 |
| imagine | 8 | 8 | 0 | 0 | 0 | 0 |
| know (don't know) | 1(0) | 3 (47) | 0 | 2 (4) | 0 | 0 |
| suppose | 0 | 6 | 0 | 0 | 0 | 0 |
| think (don't think) | 43 (5) | 47 (19) | 0 | 5 (3) | 0 | 0 |
| hope | 3 | 0 | 4 | 6 | 0 | 0 |
| wish | 1 | 0 | 0 | 0 | 0 | 0 |

We believe that the greater degree of uncertainty which initially accompanied the switch to *I guess* was then associated with all switches to English involving stances on veracity. Also, our data suggest that the English codeswitches began (on the edges) with speakers wanting to take a weak stance vis-a-vis the veracity of a statement or occurrence. It started with *I guess*, then came *I think* and others, but only to indicate uncertainty, not personal opinion like "I think que l'église est mortellement belle", in (27). This latter, we would argue, is a more recent development.

(27) **I think** que l'église est mortellement belle. (27.1A.255, Saint-Louis)
"I think that the church is really beautiful."

Intensive language contact would seem to be a prerequisite to the kind of discursive behaviour described here: not surprisingly, then, it is not reported for Quebecois French. Elsewhere in Canada, where French is a minority language, we do find evidence of use of English-language discourse markers. Mougeon and Hébrard (1975), for instance, report that English *anyway, well, you know,* etc. are associated with working-class Ontario French, in particular with speakers who speak both English and French on a regular basis; Roy (1979) makes a similar observation for use of *but* and *so* by working-class speakers of Acadian French in Moncton, New Brunswick.

The data in Table 2 show striking intercommunity differences, which are related to intensity of contact with English, mentioned earlier. As we have reported elsewhere (cf. King & Nadasdi, 1996), L'Anse-à-Canards French, spoken in Newfoundland, has had the least contact with English, followed by the French of Abram-Village, Prince Edward Island. In Saint-Louis, the other Prince Edward Island community, contact with English is most intense. While all three varieties clearly are partial to *guess*, we note the lack of occurrence of other English verbs in the L'Anse-à-Canards corpus. Abram-Village appears more "advanced" than L'Anse-à-Canards in this regard, but less so than Saint-Louis. The table masks considerable variation, though, in that it is *particular* Saint-Louis speakers who are the heaviest codeswitchers, both in terms of number of switches and variety of English verbs used. In our corpus, the Saint-Louis women (married with children) stand out as star codeswitchers and as most advanced in the use of this particular type of switches. The data for Table 1, for instance, come from five of these women. These Saint-Louis women's use of English is greater than that of other members of the sample. Most do not work outside the home, and, if they do, work at jobs which are conducted in English. Male Saint-Louis residents, on the other hand, have a far greater tendency to work at unskilled labour with other French-speaking men. Women bear the primary responsibility for child-rearing, and are largely raising English-speaking children. Both participant observation and self-report data indicate that, while the Saint-Louis women are clearly fluent speakers of the Acadian variety, a higher proportion of their lives is led in English than is that of any other speakers in the three corpora. Seen in this light, their status as star codeswitchers is not surprising.

## 7. Conclusion

The present study has attempted to shed light on the discursive function of codeswitching in several varieties of Acadian French. Our approach has allowed us to identify the role of codeswitching in indicating a bilingual's uncertainty vis-a-vis the veracity of statements, beginning with a particular class of evidentials, verbs of opinion or belief. We have argued that the English form first used with this in this manner was *guess*, suggesting that the nuance in meaning it provided was a motivating force for its initial use in the varieties of French spoken in Prince Edward Island and Newfoundland. We have also suggested that the degree of uncertainty which accompanied switching to this form became associated with all codeswitches to English. Further research on codeswitching conducted from a discourse perspective should help determine how widespread such developments are.

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# Empirical Analysis of Anti-Immigrant Metaphor in Political Discourse

Otto Santa Ana

## Abstract

A theoretically and socially important element of the public discourse framing the 1994 Proposition 187 campaign in California is identified, by analyzing the metaphors used by and reported by the print media.[1] An on-going exhaustive cataloguing of metaphors from over 200 *Los Angeles Times* articles (presently 2000 in 200,000 words) displayed the political discourse that informed California public opinion. The *Times* maintained high professional journalistic standards. It repudiated Prop. 187 in its editorial pages. Yet the predominating metaphors used by the newspaper were anti-immigrant. In so far as the print media actually influence public opinion (van Dijk 1989), this newspaper contributed to a biased public construction of reality. After laying out the basics of metaphor theory, I describe one of a set of predominant metaphors, IMMIGRATION IS DANGEROUS WATERS, which are consistent with the more encompassing, structuring metaphors used in the *Times*, NATION AS HOUSE. I end with examples of contestation of anti-immigrant metaphors, and the means by which these metaphors can be systematically contested.

## 1. Introduction

My team of students and I started a new research project last year in which we identified metaphoric representations used by the print media that frame public discourse about immigration and

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immigrants in California (Santa Ana *et al.* (ms.)).[2] The issue was the 1994 California referendum, Proposition 187. We chose to study the metaphors used by the *Los Angeles Times*, the politically quite moderate newspaper of record of the West Coast, in all its pertinent published articles during the 187 campaign. Our examination of the metaphoric structures used by the press provided us with a way of looking at the political discourse that reflected and informed public opinion during the campaign. In brief, we find that the *Times* maintained professional journalistic standards (Sigma Delta Chi 1987). It also repeatedly repudiated Proposition 187 in its editorial pages eight times in the final four months of the campaign. Nevertheless the predominating metaphoric discourse used by the *Times* was anti-immigrant, rather than a more neutral discourse. Since metaphor theory claims that metaphor organizes the experience of everyday life and structures our experience of reality (Lakoff 1993, Gibbs 1994), we have a principled way to state that this newspaper contributed to the public construction of reality, with an inadvertent bias.

The following sections I will briefly describe how metaphor works, and how metaphor works in political domains. The analysis follows. Lastly I offer a systematic way to begin to contest the dominant metaphors, whether intentional or not, that dominate America's present way of thinking about immigration.

## 2. How Metaphors Work

A metaphor is a mapping of ways of thinking about some source semantic domain to another target semantic domain. As you can see in the following examples:

| | SOURCE → TARGET |
|---|---|
| She is the flower of my garden. | flower → woman |
| She is the thorn in my side. | thorn → woman |

The source domains are those things we as humans can easily think about, the parts of our physical world which are handy and familiar.

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[2] The Wordsmiths: Juan Morán, Cynthia Sánchez, Pamela Alcoset, Cristina Fernández, Enrique Covarrubias, Elva Patricia Cortéz, Valente Guzmán, and Mónica Villalobos.

The target domains are most frequently abstract ones, hidden from our senses or otherwise unknown to us. People borrow the conceptual structure of the familiar to 'get a handle on' the target domains. Then we use the borrowed structure when talking about the target without having to think about the nature of the target domain. For example as illustrated below, Lakoff & Johnson (1980) cite a set of the conventionalized metaphors in English used to talk about the target domain of LOVE. They are grouped in this example into three basic metaphors:

Metaphors of Love (Lakoff & Johnson 1980)

LOVE IS A PHYSICAL FORCE: I could feel the electricity between us; There were sparks; The atmosphere was charged, etc.

LOVE IS MADNESS: I'm crazy about her; He drives me out of my mind; He constantly raves about her, etc.

LOVE IS WAR: She fought him off, then she fled from his advances; He is besieged by admirers, he has to fend them off, etc.

Once we accept a metaphor, so goes Lakoff's theory, all the entailments that hold for the source metaphor are automatically transferred to the target (Lakoff 1993). One entailment of insanity, namely to be insane is to have no control of one's own action, thus potentially becomes part of our understanding of what it is to be in love. This happens when people make use of the entailment, as in a statement '*I can't control myself when you're around*'.

Metaphoric relations are certainly not 'natural'. They are part of the cultural knowledge that speakers of a language tend to use unthinkingly. Moreover, as far as the theory is true, prose metaphors are used to conceptualize our world view (Gibbs 1994, Lakoff 1996). We act as if they were the only way to conceptualize the target. In the case of LOVE metaphors that I have provided just now, Navaho speakers and Korean speakers do not use LOVE IS INSANITY as a metaphor. They are very surprised at our use of these expressions.

Metaphors draw their strength from their frequency of use and commonality, the fact that people of a culture share them, that they are transparent, that is to say we do not reflect on them when we use them, and especially because metaphors from different target domains have to be consistent with a coherent way of thinking about the world. Finally, LOVE metaphors are very tightly conventionalized in our society. Changing them would require serious restructuring of the cognitive mapping of our society. Political metaphors are not as rigidly fixed.

## 3. Metaphors in Political Discourse

Metaphors of political domains operate in the same way that they do in matters of LOVE. They allow the public to grasp a shared, familiar structure and explanation of society. For example Churchill coined the term *The Iron Curtain* to characterize international relations. This metaphor was so powerful that for 50 years this way of thinking was the *only* way to think about the target, with immense social implications. Since the fall of the Berlin Wall politicians have sought new ways to metaphorically capture their point of view, and to thus conceptualize global politics for the American electorate (Chilton & Ilyin 1993).

Since the political issues of our lives are subject to debate and discussion, the metaphors that we use to discuss them are more open to change. Thus for issues such as Proposition 187, our ways of metaphorically discussing IMMIGRATION are subject to negotiation.

We began our study dismayed by California's voting public support for a divisive, anti-constitutional referendum. In spite of the vigorous campaign against Proposition 187, the vote was overwhelming. Moreover it was clear that from the beginning of the campaign, the public discourse was anti-immigrant, rather than neutral. All the major California newspapers reflected and reinforced this anti-immigrant discourse in terms of their dominant metaphor usage, irrespective of whether they editorialized in favor or against the referendum (Santa Ana 1996). In part due to this metaphoric representation of immigrants and immigration, the opponents of Proposition 187 were not able to effectively contest the way the public viewed and talked about the issues. From my point of view, these opponents of Proposition 187 were not able to present an alternative way of seeing immigration. We now turn to an analysis of contemporary American immigration metaphor as instantiated in the *Los Angeles Times*.

## 4. IMMIGRATION IS DANGEROUS WATERS

While immigrants as individuals are metaphorically characterized as animals (Santa Ana *et al.* (ms.)), the process of migration is characterized in terms of water metaphors. This may seem quite natural to people who are American English speakers, but it should be emphasized that such a construction of movement of people is *not* the only possible metaphor. Moreover, the negative connotation associated with immigration in particular has very clear social implications, and political consequences. The major metaphor for the process of the movement of substantial numbers of human beings from one country to the U.S. is characterized as IMMIGRATION IS DANGEROUS WATERS. And within this metaphor there are very clear subcategories of volume, movement and control:

1. awash under a brown tide [73][3]
2. the crush of illegal immigrants in Los Angeles is like overloading the lifeboats of a sinking ship [658]
3. the human surge [809]
4. a sea of brown faces [145]
5. compared the United States to a lifeboat that could only accommodate 10 people at one time. ... "If you put 40 people on a lifeboat it will sink and no one will be saved" [61]
6. Like waves on a beach, these human flows are literally remaking the face of America [10]

Within this metaphor there are very clear subcategories. The first subcategory of the dangerous waters is volume, which emphasizes the relative numbers of immigrants. Individuals are lost in the mass sense of these volume terms. The negative connotation is highlighted in the examples with strong adjectives such as *relentless* and *overwhelming*

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[3] Bracketed numerals are serial numbers of metaphor tokens linked to a 17 column database with full reference information.

7. foreigners who have flooded into the country [697]
8. the wave of immigration has transformed the city's population [868]
9. the relentless flow of immigrants [610]
10. an overwhelming flood of asylum-seekers have put the country in an angry funk [749]

The second subcategory of dangerous waters is movement, which emphasizes the direction of waters, primarily northward as from Mexico to the United States. Note that immigration waters are seen to be streaming inward, by terms such as *influx*.

11. Residents of the San Fernando Valley are increasingly outraged about illegal immigration—if not immigration generally—in the face of economic hard times, growing congestion, widespread crime and a dramatic influx of Latinos [507]
12. stem the tide and flow of illegal immigration [192]
13. The influx has strained states and localities—including hard-pressed Los Angeles County [524]
14. the ribbon of rust-colored steel apparently has not impeded the flow north [811]

The third subcategory is the control of dangerous waters. Here the efforts to reduce the immigration of undocumented workers pursues a correspondence of the dangerous waters metaphor by describing means by which the waters can be held back or stemmed.

15. an attempt to stem illegal immigration [272] (*to stem* = make headway against an adverse tide)
16. the opportunistic criminal element that exploits our porous borders [686]
17. hard-line measures intended to stem the flow of undocumented immigrants [508]
18. the nation's porous immigration laws [513]

The connotations of this metaphor are extensive. By treating immigration as dangerous waters, the individuality of the immigrants and their humanity are backgrounded. In its place a frightening scenario of uncontrolled movements of water can be played out, with devastating floods, and inundating surges of brown faces. The issue of what is being washed away is very important, but cannot be fully addressed in this working paper. In short, the brown flood that is feared will inundate Anglo American cultural dominance. Since little evidence of an inundation has to be demonstrated to invoke alarm, floods are a perfect metaphor to inspire dread and fear. The hard-working, family-oriented immigrant who believes in the American dream is hidden with the use of this metaphor. His or her human quality is diminished as volume and movement are emphasized.

Following Lakoff (1993), the metaphor can be presented as both an informal description and a more formal ontological mapping. The informal scenario, i.e., the entailed inferences that are labeled "IMMIGRATION IS DANGEROUS WATERS," follows:

> A flood of immigrants is flowing into America. It threatens to inundate Anglo America. By sheer volume and with a different nature the flood will cover the territory of America with a sea of people that do not look, act or speak like Anglo Americans. Waters are fundamentally different than the land. In small quantities the land can absorb an influx unchanged. In volume, however this flow threatens to change the contours of the land. The territory will not be able to absorb or control the flow. It will be eroded. The territory will be destroyed.

The metaphor labeled "IMMIGRATION IS DANGEROUS WATERS" is tightly structured to map the ontology of floods and tides onto the domain of immigration. The mapping is as follows:

- Immigration corresponds to moving waters.
- The US corresponds to a land subject to change from floods.
- Increased immigration corresponds to an increase in the threat to the land.

- The vulnerability of land to flooding corresponds to the US's vulnerability to fundamental change.

IMMIGRATION IS DANGEROUS WATERS is only one element of a larger schema of metaphors (which have been compiled in this text-empirical way). Other metaphors which I cannot discuss in this paper include IMMIGRANTS ARE ANIMALS, WEEDS and A DISEASE. These are metaphorical entailments of larger non-Latino metaphors which characterize aspects of the public and the electorate are: PUBLIC SENTIMENT IS MOVING WATER, SEVERE WEATHER and FIRE.

## 5. U.S. IS A HOME

If we find a way to connect these metaphors into a larger framework, then we can understand how they reinforce one another and the structure to which they belong. A structuring metaphor can make this happen. It gives an analysis strength because it links the metaphors into a more coherent, encompassing structure. Looking for the bigger picture in our case, we found one of the structuring metaphors for our study to be: NATION IS HOME.[4] Example 20 tells us this home has a frame. Examples 21–24 give us the structure of this home complete with doors, corridors, and bedrooms.

20. the strikers are trying to frame their arguments in peaceful 'family-oriented' terms. [790]
21. There are extremists—those who would build an alligator-filled moat, and those who would swing the door open. [819]
22. the urban corridor below San Diego. [813]
23. "This is kind of a bedroom community," explained an auto salesman [813]
24. "close our borders tight to illegal aliens and drug-runners" [527]

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[4] Alternative analyses are of course possible, e.g. proposals for a more generalized HUMANITY IS OCEAN and NATION AS LIFERAFT schema, as suggested by an anonymous *PWPL* reviewer.

We're very protective of our homes. We fear anything that threatens the stability and general welfare of our home, according to these examples of metaphors. The US as a home is only one example of territoriality that we noticed in the dominant metaphors. Note that this kind of metaphor, as noted by an anonymous *PWPL* reviewer also keeps the discourse of Anglo-American citizens at a personal human level, in contrast to the non-human, abstract or mass noun metaphors for immigrants and immigration. Whether cultural, linguistic, or material territories, we normally will resort to any means necessary to protect them. We feel we own these territories because they partly define who we are. I will not be able to expand in this paper on the matter of an associated metaphor, POLITICS IS WAR, which is consistent with the IMMIGRATION IS DANGEROUS WATERS metaphor and illustrates the proposition that people are prepared to go to extremes to 'guard their homes'.[5]

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[5] A sampling of the POLITICS IS WAR metaphor tokens follows. These can be classified as metaphors which refer to the sounds of violence, the actions involving fighting, strategies and tactics of war, and outcomes:

a. Ninety percent of the 'thump' (abuse) cases come from agents who are fired [408]
b. Proposition 187 subtly attacks the dignity and humanity of a defenseless people [266]
c. "invasion" of illegal immigrants is causing economic hardship and eroding lifestyles [215]
d. the greater effectiveness of the border control program in preventing illegals from penetrating the first line of defense. [725]
e. Saying that up to 1,000 illegal immigrants were among those arrested during the Los Angeles riots, Buchanan repeated his previous calls to fortify key sections of the border with ditches and concrete-buttressed fences and to deploy U.S. military forces there if necessary. [855]
f. Third World take over [2[illegible]8]

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## 6. Contesting the Dominant Metaphors

It is not enough to catalog the deleterious representations of immigrants and immigration in public discourse. While the great majority of the 2000+ metaphor tokens were consistent with the dominant anti-immigrant metaphoric mappings, a few tokens were striking refutations of these metaphors. These direct contestations turn the dominant metaphor on its ear.

A common metaphor states that immigrants are a burden on society. One refutation of this metaphor is shown in example 25, as it tweaks the dominant metaphor by respecifying the target. Likewise, the most common target of Prop. 187 was the innocent children. In example 26, the ultimate political implications of the proposition is outlined sharply.

25. "These people are carrying more than their own weight," Hayes-Bautista said. [719]
26. [Proposition 187] is like target practice against the Constitution. [230]

There are specific ways to systematically contest the dominant metaphoric structures, as Chilton & Ilyin (1993) point out. In the final section of this paper I will turn to the second means, which is to reject the dominant metaphor and supply another.

### IMMIGRATION IS BENEFICIAL WATER

In order to seek consistency with the world view of the American voting public, we rework with the dominant metaphoric mappings provided by the *Times*. The first set of alternative mappings retain the source metaphor of water, but give it a positive spin:

IMMIGRATION IS BENEFICIAL WATERS, or
IMMIGRATION IS IRRIGATION FOR A DESERT, or
IMMIGRATION IS A WELL-SPRING OF AMERICAN WEALTH.

These metaphors are linked to frequently-used metaphoric characterizations of the US economy and culture. Thus the worldviews of the electorate do not have to be radically revamped for the positive waters metaphor to be promulgated. A whole series of particular metaphors now can be developed that are based on the mappings presented.

## BLOOD OF THE BODY

A second set of alternative metaphor mappings uses a different source domain, NATION AS BODY. Examples 27 and 28 are a couple of example of this recurrent metaphor from the *Times:*

27. trend-setting state or the ice-hearted domain where the people had put dollar concerns ahead of humanitarian will [1496]
28. a big country with a very small heart [1502]

ECONOMY AS BODY is not at all a novel metaphor. We found tokens of the metaphor in the *Times* database. There are tokens in the *Times* database that actually use the IMMIGRATION AS BLOOD metaphor, with a negative connotation, as in examples 29 and 30:

29. only improved economies can stanch the northward flow of illegal immigrants. [386]
30. those…who would pollute the cultural bloodstream [1447]

A novelist, Carlos Fuentes, is well aware of the larger, body metaphor. In example 31 he extends it with the idea that the political boundaries separating nations are artificial, and that the US/Mexican boundary is an injury to a body larger than the political nation:

31. This border is the most exciting border in the world. It is crossed by 200 million people a year. …I have always said it is a scar, not a border. But we don't want the scar to bleed again. We want the scar to heal. [52]

Thus in our work, we use entailments of the body metaphor, such as *blood flow* and *pulse*, to create a new metaphor for immigration. The new metaphor maps the source domain, the blood of the body, to a target domain, which is the vital nature of immigration for the

American economy. Thus the metaphor is: IMMIGRATION IS BLOOD. The ontological mapping of the metaphors can be characterized in a single sentence:

- Immigration flow corresponds to the body's blood flow.

A whole series of particular metaphors now can be developed that are based on the mappings presented, of which I present only three:

32. Prop. 187 will be economic suicide for California
33. stopping immigration will cut California's jugular
34. Prop. 187 will sever the artery that nourishes California's industries

These and other instances of the new metaphor can be used to provide an alternative, affirmative way of talking about immigration. A creative mind can expand on this metaphor, contest the dominant metaphor, and regularly repeat instances of the alternative, *insurgent* metaphor in order to begin to constructively restructure the way the general public unthinkingly frames its world view of immigration.

## 7. Conclusion

Contemporary metaphor theory makes very strong claims that the prosaic metaphors which we commonly and unblinkingly use reveal the underpinnings of our common sense world view and expose the structuring principles of our experience. However compelling, these claims have primarily been made on the basis of introspection and deduction (Lakoff 1993, 1996), with secondary experimental studies in cognitive psychology (Gibbs 1994). Here I offer a language use based analysis that brings gritty empiricism to bear on the claims—and hopefully a new way to analyze language variation, which has focused almost exclusively on phonological and morphological domains.

As for matters of metaphor theory, this language use based method can clarify deductive analyses of metaphor, such as Lakoff's *Moral Politics* (1996), in which he provides a deductive analysis of the presumed representations of immigrants based on his interpretation of the basic contrast of liberal versus conservative political stances in our country (Santa Ana *et al.* (ms.)).

Lastly, in recent years qualitative sociolinguistics has developed a direction of research which has been termed 'language ideology' (Woolard 1992). It draws on many sources of social theory and can encompass a wide range of sociolinguistic studies (e.g., attitudes, common sense, norms, prestige, hegemony). From the field of discourse analysis, van Dijk (1993) has called for socially-engaged research that addresses focuses on the role of discourse in the reproduction of social dominance. The language use based analysis of prose metaphors presented here is offered as an empirical means to reveal and evaluate the ideological structure of political discourse. With it the nature of metaphor in political argumentation can be documented and analyzed. As the insidious dominant metaphors used to frame common sense thinking about our society are brought out in bold relief, these may be more effectively contested.

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# Is There An Authentic African American Speech Community: Carla Revisited

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## 1. Introduction[1]

In the 1990s where the language and musical styles of black popular culture are disseminated to international masses (Dent 1992), young people of diverse backgrounds are emulating representations of urban African and African American youth culture. For example, in Japan, youth have appropriated the baggy dress style and even dreadlocked hairstyles associated with African reggae and African American hip hop and rap culture (Jones 1993). Similarly, Russian, British and Asian youth have, in recent decades, adopted the discourse and dress styles of their Afro-Caribbean and African American peers[2] (Hewitt 1986, Gilroy 1987, Jones 1988, Knobel 1994, Rampton 1995, Wulff 1995). For many of these non-black youth, the language and dress styles of their black peers and musical icons are tropes of resistance against universal forms of oppression (cf. Morgan 1993b) and a means to construct "cool" or "hard" identities and align with their black peers (Rampton 1995, Bucholtz 1996).

Yet, white adolescents need not rely on peer associations with blacks in order to hone their outward affinities to black language and culture. With the explosion of hip hop magazines, televised jukeboxes featuring the latest rap and soul videos, and stand-up comedy and films about urban black street life, youth of diverse backgrounds can now educate themselves within the confines of their bedrooms (Jones 1988, Heard 1994, Cutler 1996). Black discourse styles have begun to constitute a form of symbolic capital for many non-black youth (cf. Bourdieu 1991). Thus, it is not surprising that some find it fitting to speak creole and sport African styles of dress in contexts where it is sanctioned by their cultural mentors, as well as in their wider interactions in Afro-Caribbean clubs or communities (Hewitt 1986, Jones 1988, Rampton 1995).

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[1] I am greatly indebted to Marcyliena Morgan, the UCLA Anthropology Linguistics Lab and Stan Huey Jr. who provided valuable comments on this paper. Any final shortcomings are, of course, my own.

[2] Silverman (1975) and Labov et al. (1968) have also documented the use of AAE grammar and phonology by Puerto Rican youth with strong peer group associations with African Americans.

It is often in the latter more public domain that African Americans consider non-blacks' explicit identification with black culture as problematic. Consequently, though a white U.S. rap group called Young Black Teenagers views its name and emulation of African American rap styles as a way to undermine racial stereotypes and unite diverse youth under a shared hip hop mentality (Brown 1991), many African American youth see this group as appropriating aspects of urban adolescent black culture and identity. Moreover, whites whose outward expressions reflect black language and culture are often derogatorily labeled "whites who are trying (or want) to be black" and "wiggas" (Heard 1994, Smitherman 1994).[3] Similarly, Jones (1988) and Rampton (1995) find that white Britons who viewed their use of creole as a linguistic alignment with Rastafarian culture and resistance were openly reprimanded by Afro-Caribbeans who interpreted their stylistic use of creole as a stereotypical cooption of African culture and identity.

In this paper, I discuss a white speaker's use of a variety of African American English (AAE) that is predominantly spoken by urban adolescent males. This variety is one which is characterized by the use of African American prosodic system, including rhythm and tempo, timing and pitch, rising and falling intonation, the use of African American lexical items and idiomatic expressions, and the relative high use of phonological forms [/d/ substitution for /th/ and postvocalic /r/] thought to be characteristic of AAE speakers (cf. Morgan 1996a, Mufwene 1992). Unlike the non-black working class adolescents discussed in previous studies (Hewitt 1986, Jones 1988), this speaker is not an adolescent male but is in his mid-20s and was socialized in an upper-middle class suburb in New York city. Further, his use of AAE is fairly consistent across social and formal contexts. At a time when the notion of identity has been firmly redefined as ever-shifting, multiple, fragmented and decentered (Hall 1992a; 1992b, Mercer 1994), this speaker problematizes the notion of an "authentic" African American speech community (AASC) by bringing into question the etic, often linguistic, standards by which its socio-linguistic authenticity has been defined. The social and political implications of this and similar cases further expose the politics of language, ideology and identity within the AASC.

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[3] The stylistic appropriation of African American music and idiomatic expressions have been critically noted in previous scholarship as well. See, for example, Dillard 1977; 1972, Walker 1971, Williams 1971, and Brown 1968.

## 2. Carla Revisited

Though the above examples of linguistic cooption or alternatively, respect and flattering may appear modern, they are in many ways directly related to theoretical issues which emerged in the 1970s concerning who speaks AAE? This question was indirectly addressed by Hatala (1976) and Labov (1980) in their analyses of Carla, a white adolescent attending a predominantly black urban school in Camden, New Jersey. Intrigued by Carla's verbal skill within this AASC, Hatala surveyed 46 African Americans who unanimously classified Carla as African American after hearing her speech sample. In a linguistic analysis of Carla's speech, however, Labov noted that although she reportedly sounded black through her use of African American syntactic, prosodic and lexical markers, Carla employed few grammatical indicators considered significant by linguists. Labov concluded that Carla was not an authentic AAE speaker and thus, not a member of the African American speech community. This was a powerful conclusion as it presented linguistics as the *definitive* criteria by which to determine "authentic" AAE speakers and legitimate their status's within the AASC. Since Labov's attempt to delimit the boundaries of the AASC discounted the social situatedness of discourse and over-stated the import of grammar and phonology (Kroskrity 1993), it is not surprising that several scholars have taken issue with the theoretical bases of Labov's findings (cf. Bucholtz 1995).

Labov's reliance on—and explicit preference for—grammatical and phonological criteria necessarily precludes the import of linguistic ideologies as, following Silverstein (1979) "... sets of beliefs about language articulated by users as a rationalization or justification of perceived language and structure and use." Many researchers (e.g., Morgan 1994a, Kroskrity 1992, Preston 1989, Butters 1984), including Labov himself (1975; 1972a; 1972b) likewise note the significance of individual language attitudes in uncovering the shared social and interpretive norms of language usage that characterize members of a speech community and shape their evaluations of their own and others' speech. But, as Woolard (1992) notes, Labov's oversight, though, is not surprising since he views ideology as overt political discourse and thus explicitly discounts the power of ideology to affect speech forms (Labov 1979:329).

A strictly linguistic analysis also fails to account for metalinguistic means through which members demonstrate their competence, as well as validate others', in a speech community (Spears 1988, Rickford 1985, Sankoff 1989). Duranti (1994) notes that members of a speech community demonstrate their competence by adhering to discourse norms as active consumers and producers of texts, as well as through their ability to simultaneously exploit heteroglossia and reproduce at least an appearance of an encompassing system (see also Morgan 1994a, Kroskrity 1993, Weinreich, Labov & Herzog 1968). Likewise, Carla's use of Standard American English (SAE) grammar and African American syntactic, prosodic and lexical cues might also indicate her command of an African American linguistic repertoire (Gumperz 1982). As DeBose (1992) argues, this linguistic repertoire is one which emphasizes the use of both SAE and AAE as an inherent aspect of AAE and the AASC (see Kroskrity 1993 for a similar discussion of the value of linguistic variation among the Arizona Tewa). Moreover, Labov's linguistic assessment of Carla was based upon the syntactic and phonological speech practices of teenage male street gangs (Labov 1966; 1972b) although research, including Labov's (1991) has shown that women's speech is typically more standard than men's (cf. Gal

1991, Morgan 1991, Henley 1995). In order to more fully appreciate how speakers like Carla successfully negotiate their competence as AAE speakers, additional attention must be devoted to the personal, biographical and interactional basis of linguistic knowledge—areas which increasingly call for qualitative forms of analysis (Kroskrity 1993).

Accordingly, the current study employs both quantitative and qualitative methods to examine the speech of three males fictitiously named Mike, Greg, and Ron. All three speakers are college educated, from middle class backgrounds, and were in their early to mid-20s when they were interviewed. Although all three identify themselves culturally as African American, Mike and Greg are African American while Ron is Anglo-American. Ron employs a variety of discourse styles associated with young, hip, urban African American male culture. Several of Ron's African American classmates likewise describe him as "talking black" and more pejoratively as "thinking he talks black." In contrast, Mike and Greg employ discourse styles more closely associated with educated and middle-class African American speakers. Greg employs both AAE and SAE language styles, though his speech has relatively more SAE grammatical and phonological forms. Greg uses SAE phonology and grammar fairly consistently. Mike's employs SAE grammar and phonology as well, but frequently codeswitches into AAE through his use of prosody, phonology, and idiomatic expressions. Mike occasionally speaks with a nasal. Ron, Greg and Mike interact quite extensively in African American speech communities and all three admit that their respective statuses as AAE speakers have been previously called into question by (often lower class and adolescent African American speakers).

In replicating Labov and Hatala's analyses, I provide a quantitative linguistic analysis of Ron, Mike and Greg's speech, examining the extent to which they employ AAE grammar and phonology. Understanding that linguistic analysis is insufficient in and of itself in revealing each speaker's degree of linguistic competence, I also use discourse analysis to explore their use of AAE in relation to the African American linguistic repertoire. These related analyses attempt to critically revisit the question, "Who speaks AAE?" addressed in Labov (1980) and Hatala's

(1976) studies. Lastly, and in an attempt to address what it *means* to speak AAE, I present survey results for 92 survey respondents (45 African American, 33 Anglo American, 8 Latino and 4 Asian) who, after hearing a speech sample, provided race and social class assessments of each speaker. Collectively, these findings juxtapose etic assessments of "Who speaks AAE" with emic evaluations of what it *means* to speak a particular variety of AAE. In doing so, they directly address the heterogeneity of speakers and the politics of language, identity, and ideology within the AASC. Before assessing the three speaker's place within the AASC, it is first necessary to discuss previous literature concerning, "Who speaks AAE?" and "What (does) it mean to speak AAE?"

## 3. The African American Speech Community

### 3.1. Who Speaks AAE?

Smitherman (1977) notes that AAE is spoken predominantly by lower-class African Americans, though African American adolescents irrespective of class use AAE grammar and phonology more than adults (cf. Morgan 1994a). Rickford et al. (1991) likewise found copula absence (e.g., He ∅ funny) to be quite common among the youngest African American speakers in their East Palo Alto sample.

Even among adolescents, however, the strict use of AAE grammar and phonology across formal and informal contexts is quite marked as they demonstrate an ability to codeswitch between AAE and SAE when speaking with their elders and other authority figures (Morgan, personal communication). In fact, many African Americans display a command of both AAE and SAE, though individual speakers differ with respect to their use of each variety (Dillard 1972, Morgan 1996b). Middle class speakers employ less AAE features, yet codeswitch between Standard American English (SAE) and AAE (Spears 1988, DeBose 1992). Additionally, Morgan (1993a; 1994a) notes that working class speakers also employ both of these codes for conversational signifying.

### 3.2. What does it Mean to Speak AAE? African American Linguistic Ideologies

Perceptions of AAE vary within the AASC ranging from the view of language as a symbol of ethnic and cultural identity to ambivalence or, though less common, a strong disdain for its use (cf. Morgan 1994a). With respect to the latter view, some African Americans (often teachers and lower-middle class speakers) have rejected the alternative labels of AAE (Black English and Black English Vernacular) and its use by other (allegedly lower class and uneducated) African American speakers on the basis that AAE is pathological, disordered and lazy speech which threatens speakers' educational and economic success (Brown 1991, Speicher & McMahon 1992, Morgan 1994a).

African Americans who are more sympathetic to AAE often see this variety as being intricately linked to their ethnic and cultural identity. This perspective is demonstrated in African American speakers' strong disdain for being accused of speaking or talking "white" (cf. Morgan 1994a). Additionally, while acknowledging the marginalization of AAE in wider society, AAE speakers also see their language as a form of symbolic capital which provides them with access to certain rights and privileges within the AASC (cf. Morgan 1994a).

The ability to speak AAE is, for example, often considered to be indexical of a speaker's racial consciousness such that the strict use of SAE is indicative of a low sense of ethnic and cultural pride (Morgan 1994a). Likewise, middle class African Americans, and youth in particular, who were not socialized within the African American speech community attempt to assert their cultural consciousness by speaking the variety of AAE accessible to them via rap and hip-hop culture. Dillard (1977) and Baugh (1987; 1992) have also shown that upper-middle class African American college students hypocorrect in their use of AAE phonology and grammar. These students also attempt to speak AAE in both formal and informal settings, though with varying degrees of social and linguistic success. Labov (1979) presents a related case in which a 25 year-old, college-educated African American male, Steve K, attempted to reverse his pattern of style

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shifting towards the norm of careful speech in order to return to his earlier vernacular.

### 3.3. African American Discourse Styles & Verbal Genres

Members of the AASC often demonstrate their communicative competence through their adherence to shared norms governing the proper use and interpretation of discourse styles and verbal genres across social contexts. Morgan (cf. 1994a) argues that these shared norms and ideologies are rooted in a social, historical, and political reality which mandated that African Americans develop modes of communicating among themselves as well as in the presence of potential spies or over-hearers.

Likewise, African Americans developed a counter-language during slavery which relied on an African system of indirectness (Morgan 1991; 1993a; 1994a; 1996b). Within this system of indirectness, words or phrases and social encounters can have contradictory or multiple meanings beyond their traditional English interpretations. As Morgan likewise notes, elements of *double entendre* pervade slave songs and contemporary hip hop and rap styles. To illustrate, she notes that the term "bad" is used by AAE speakers to denote something positive.

AAE speakers also demonstrate their competence through the use of prosodic features belonging to a larger interpretive practice called *"reading dialect"*(Morgan 1996b). Reading dialect occurs when members of the African American community contrast or otherwise highlight obvious features of AAE and SAE in an unsubtle and unambiguous manner to make a point (Morgan 1996b: 26). Within this practice, speaker can employ rising and falling intonation, loud talking, vowel lengthening, rhythm and tempo, timing and high pitch,—as well as range of accompanying kinesic strategies, to prescribe specific responses from speakers, targets and hearers. For example, speakers can employ *marking*, which involves mimicking a language variety out of context in such a way that it carries an expressive value towards an intended subject. Morgan also notes that speaking rhythmically (often with regularized intervals between talks and pauses) signals that the interaction is highly marked as African American and likely to lead to conversational signifying (1996b: 29).

In addition to establishing speaker competence, the use of these discourse styles and verbal genres constitute a speaker's social face and as such, mark that a conversation has evolved to entail cultural forms of discourse, interpretation and resolution (cf. Morgan 1996a).

## 4. An Overview of AAE Grammar & Phonology

Speakers also employ AAE grammar in ways which shift contextual frames in conversation (Gumperz 1982b). Deletion of the copula *be* or auxiliary *be* (overwhelmingly *is* and *are* contractions) is easily one of AAE's most extensively studied grammatical features. The sentence "We ∅ limited in what we can do" illustrates copula deletion in AAE. This sentence is realized in SAE as "We are limited in what we can do."

Research on copula variation *(i.e., copula contraction and deletion)* has addressed whether AAE has derived from African-based creoles, European English or some combination of the two (cf. Mufwene 1994). While the origins of AAE are important, they extend beyond the scope of this paper. This section provides a general overview of the AAE copula system.[4]

The absence of copula[5] may occur in 1st, 2nd, and 3rd person singular, as well as in the plural forms. The most influential research in this area has investigated distinct grammatical constraints, or the environments favoring and the rules governing copula contraction and deletion. Labov's (1969b; 1972b) variable rule for contraction and deletion provides a ranked order of the grammatical environment most conducive to copula deletion. He found the environments which constrain the deletion rule (in order from least to most favorable) to include predicate noun phrases, adjectives and locatives, verbs, and the auxiliary *gon(na)* before a verb:

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[4] The reader will likewise notice the conspicuous absence of scholars who have reviewed the copula from dialectology or creolist perspectives (cf. Winford 1990, Holm 1984, Le Page and DeCamp 1960, Turner 1949).

[5] Earlier studies of copula variation argued copula absence to be an absolute feature of AAE (Rickford et al 1991, Stewart 1969, Bailey 1965). The argument of zero copula, though is understood to be a clear overstatement among contemporary scholars.

**Figure 1: Grammatical Environments Favoring Copula Deletion**

| | | | |
|---|---|---|---|
| **LEAST FAVORABLE** | 1. | In present before predicate nouns and adjectives. | *He a friend.*<br>*He tired.* |
| ↓ | 2. | In adjectives, locative and comitative phrases. | *She over there.*<br>*She with us.* |
| | 3. | Auxiliary forms "be...ing" | *He working with us.* |
| **MOST FAVORABLE** | 4. | Auxiliary gon(na) before a verb | *She gon(na) do well.* |

Labov's work has since been revisited by a number of dialectologists and creolists in efforts to refine certain aspects of the rule (Rickford 1991) and to better understand AAE's relation to West African creoles and SAE (Stewart 1969, Dillard 1972, Baugh 1980, Winford 1992).

The habitual marker *be* is another highly debated grammatical feature thought to distinguish AAE from SAE (Fasold 1972, Myhill 1988, Spears 1988). In AAE, the habitual *be* has the same copula and auxiliary functions as the conjugated forms *am, is, are, was,* and *were* in SAE. Yet, unlike SAE, the habitual *be* indicates a recurring state or activity and its form is not derived from *will be* or *would be*. Smitherman (1985) differentiates the habitual *be* from the future *be* as follows: Habitual ***be***: *I be there* (Gloss: I (usually) be/am there), Future ***be***: *I be there* (Gloss: I will be there).

With respect to its usage, Mufwene (1994) and Morgan (1994a) note that when a verb heads the predicate phrase, the verb must be in the progressive as in, "She be talkin' every time I come" (Morgan 1994:332). Mufwene also provides another form: *be + nonverbal predicate,* as in "I be tired by the end of the day," which can be glossed as "I am [usually] tired by the end of the day." Although these constructions are usually non-stative, they also occur with stative constructions (Richardson 1991, Morgan 1994a).

*Been* as a remote present perfect form is another celebrated feature of AAE and generally refers to the *unstressed been*. The *unstressed been* is illustrated as a remote present perfect form in the following sentence, *Mary been working here for a week now.* [Gloss: Mary has been working here for a week now]. Labov (1969a) argues that *been* appears in contexts where it seems like "have" was deleted, such as in *They been gone.* Yet, the AAE ***stressed been*** is used regardless of the form of the subject or whether *have* is present or past tense (Stewart 1968, Dillard 1972, Rickford 1975, Smitherman 1985). Mufwene (1994) illustrates the latter case in "I bin know(in) you" which means, "I have known you for a long time." This *stressed been*, as described by Stewart (1965), Loflin (1970), Dillard (1972), Fickett (1972), and Rickford (1975; 1977), essentially serves as a tense marker (Morgan 1991) or a past perfect marker (cf. Fasold and Wolfram 1975).

*Done* marks the perfective in AAE, and in some cases duly acts as an intensifier (Mufwene 1994). Spears (1988) illustrates the perfective *done* in *She done took it* [Gloss: She took it!] which can be heard in the speech of many southern whites and African Americans in southern and northern urban areas. *Done* normally occurs before the verb in the same position as the auxiliary have and usually acts as the equivalent of have. Labov (1972a) notes that *done* encodes an intensive meaning that is not possible in SAE. Essentially, *done* serves as an adverb, functioning sometimes like *already* or *really* and has lost its status as a verb (56). Both *been* and *done* have also been observed among West African Creoles, including Gullah (Mufwene 1994, Rickford 1977; 1975).

The AAE negative system includes multiple negations and negative inversion (Mufwene 1994, Spears 1988, Smitherman 1985, Whatley 1981, Labov 1972a). Spears (1988) illustrates the use of a double negative in the sentence *It ain't nobody in there*, which translates into *There is no one in there* in SAE. Labov (1972a) and Spears (1988) note the use of negative inversion in the phrase D*on't nobody know it's really a God,*" which can be glossed in SAE as *Nobody knows whether there is really a God.*

Morgan (1994b) notes that AAE methods of pluralization, possessive marking, and verbal agreement contrast significantly with SAE. According to Labov (1980), AAE does not use the verbal -s in subject-verb agreement and AAE speakers likewise do not have an underlying third singular -s. This is illustrated in the sentence *She laugh funny.* Baugh (1983) also found that the occurrence of /s/ where the form can represent pluralization, possession and subject-verb agreement can also depend on the speech event (Morgan 1994:331). In a similar vein, Mufwene (1994:11) cites the absence of the possessive marker in sentences such as "*he like/see me*" and/or "*my two puppy/dog*" as characterizing the grammatical possibilities in AAE.

AAE is also marked, though not exclusively, by several phonological features, including the variable absence of interdental fricatives such as *th*ink and *th*en, which are substituted by /t/ or /d/ in word initial position (Morgan 1994a, Mufwene 1994). AAE is also considered to be non-rhotic or /r/-less in word final position, thus yielding /mo:/ for *more* or /fo:/ for *four* (Labov 1966, Mufwene 1994, Morgan 1994a). AAE speakers also lower the vowel /ɪ/ to /æ/ before /ŋ/ to yield *takin'* for *taking*. Similarly, the diphthong /ay/ is phonologically reduced to /ɪ/ in cases like /mɪ/ for /my/ or /ovɪ/ for /over/.

*Vowel lengthening* is another feature of expressive speech among African Americans (Morgan 1996b). AAE speakers similarly use *timing and rhythm* in creative and strategic ways in both formal and informal conversation. Morgan notes that rhythmic speech often signals that the interaction is highly marked as African American and is likely to lead to conversational signifying (1996b:29).

## 5. Ethnographic Description of Participants

Ron, Mike and Greg use some of the discourse and linguistic features described above. Ron is a white male who self-identifies with black identity and culture. At the time of the study, Ron was in his mid-20s and pursuing a graduate degree in African American studies at a major university. Ron grew up in an upper middle class suburb in New York, where Standard American English (SAE) was spoken in his immediate community and at home. As a youth, he interacted with African Americans residing in a peripheral community and was otherwise exposed to African American culture through hip hop, rap and other products of popular culture. Ron emphasizes the major role that hip hop has played in introducing him to African American culture. He states with adolescent phonology and the use of the unstressed been, "You know like hip hop been a part of */mɔ/* life like you know */fo/ /evə/.*"

Ron's identification with adolescent urban African American culture is also marked by his physical representation. Ron's rhythmic gait resembles what several African American comedians (e.g., Richard Pryor) and Johnson (1975) have described as a performed "cool" and markedly "black" walk. At the time of the interview, Ron wore Cross Colors, and other brightly colored and baggy "gear" associated with the 1992 hip hop scene. His hair was cut in a *fade*, a common hairstyle among African American males which is high on top and very short or completely shaved on the sides and back (Smitherman 1994:106).

As Ron's graduate education included upper-division seminars on African American English and African American musical styles, Ron developed a sophisticated metalanguage for describing AAE and the important role it played in indexing identity and racial consciousness among African American speakers. Sometimes, Ron would challenge African Americans' racial authenticity based on their use of a particular register or their knowledge of African and African American history. As a classmate turned informal interviewer, I was not immune from such identity checks. At the time of the interview, Ron was taking a graduate seminar on African American English.

I also conducted informal ethnographic observations of Ron in a graduate seminar. Ron's use of the AAE prosodic system and select grammatical markers was not affected by context (formal, informal, age of addressee), although his African American peers seemed to operate with another set of criteria. When Ron's comments involved contextualized descriptions of hip hop or other social and cultural aspects of the African American speech community (as was often the case), Ron used African American phonology and grammar quite freely. Yet, even when engaged in serious speech (e.g., taking a political stance, referring to other scholars) Ron at the very least made use of the AAE prosodic system. Most of Ron's African American peers used (SAE) and Standard African American English (SAAE) during classroom discussions. As such, some of Ron's peers felt as though Ron had not registered—or did not acknowledge through practice—the range of codes characterizing an African American linguistic repertoire or the norms governing the use of AAE in various contexts (Anderson 1977, Ferguson 1977, DeBose 1992).[6] Because Ron appears to lack an awareness of the appropriate contexts in which to use AAE and fails to demonstrate an ability to move between more formal and informal African American speech varieties, he was viewed by many of his African American peers as performing a stereotyped version of AAE. In this way, Ron's speech emulates an adolescent variety and as such, is more commensurate with Baugh's (1987; 1992) description of upper-middle class blacks who employed AAE phonology and grammar in both formal and informal university settings.

Ron's background would seem to suggest that his use of AAE was acquired later on in his life. Ron himself acknowledges that when he was younger, hip hop did not occupy a prominent place in his life. He states, "I can /rimımbı/ back in /nı/ day (.) but I was only about … probably about seven or eight so it was *((chuckles))* .. it wasn't as (.1) as big of a thing…" It was in Ron's late teen years that hip hop became a salient feature of his social life. At one point, Ron suggested that his use of AAE was actually strategic. In order for him to make important contributions to the African American community, Ron felt that a command of African

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[6] One of Ron's peers made the following comment about him as a participant in Matthew's (1996) study. (The speaker had been asked whether they thought members of other races could be considered black): "…*It's like this one, and I'm just going to call him 'Brotha'. There's this Anglo American … and when I sat there and talked to him, he just had the lingo down, hip hop and everything. I never felt whiter than sitting by him. And I remember thinking, 'Where did he get all of this?' For him, they were very much acquired like by MTV … There's no way that someone like him could identify to, let's say maybe a historical past because that history is not his. And he can watch MTV, Yo! MTV Raps how much he wants but that's not going to make him any Blacker … You know what people. are calling Blackness has sort of turned into a commodity. And you got the lingo down, you got the hip hop down, you got everything. You know, you're sort of Blacker, and that's definitely something that's part of our heritage. But understanding that doesn't put you into that Black sensibility.*"

American culture (and presumably AAE) was absolutely essential. Ron states, "...And when I sit up in a boardroom you know and say something outlandish like (1.0) um you know 'The Milwaukee Academy [a school for young black males with an explicit Afrocentric philosophy] isn't such a bad idea but it's positive affects to it you know' ... I need to be able to say 'Look I've spent time studying this' because I can't just say I know what I'm talking about because my ... physical manifestations and representations (.1) I-E my skin color will ... trigger a certain reaction automatically that I'm supposed to have no connection ... to understanding ... or empathy to that perspective okay regardless of whatever..."

Mike and Greg, the two African American male participants, were socialized in middle to upper-middle class African American communities in Los Angeles. They were selected to participate because of their class and age backgrounds, their use of AAE, and their explicit identification with African American culture, all aspects shared by Ron. Like Ron, both Mike and Greg supported the notion that one's use of AAE was a reflection of one's racial consciousness. Yet, both also added that, in practice, their use of AAE was relegated to less formal and more African-American dominated contexts. Mike and especially Greg revealed their disdain for being accused of "talking white" by both African Americans and other ethnic groups. Both reported that their linguistic repertoires consisted of both AAE and SAE and their use of these codes varied across social contexts and with various speakers.

Mike, a recent college graduate, seemed to have the greatest command over African American speech varieties. In several interviews and phone conversations, Mike codeswitched between SAE and AAE. At the time of the interview, he was working in a law firm and had interests in pursuing a law degree. In our interview, Mike noted his and his other black colleagues' tendency to codeswitch to AAE in order to acknowledge their cultural affinity while working within the court system. Mike's attire ranged from business suit to sweat pants, tee shirt and baseball cap worn backwards. He also sported a *fade*.

The community in which Greg was socialized is mixed between middle and upper middle class. His parents are first-

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generation members of the middle-class and as Greg notes, have stressed the values of hard work throughout his life. Greg attributes his parents' encouragement to his success at a major university; He graduated with a host of academic and service awards with a degree in English. For Greg, English was directly related to the refinement of his speaking skills. Greg reasoned that this major would enable him to communicate effectively in a (white) business world. Unlike Ron and Mike, Greg seldom sported clothes that were markedly associated with the early 1990's hip hop scene. In fact, even when dressed casually, Greg's undergraduate ensemble consisted of top designer labels.

## 6. Description of Data

To elicit everyday speech from the three speakers, ethnographic interviews were conducted at my home during May and June of 1992. I had already established a rapport with Ron and Greg prior to their interviews given the fact that they were casual acquaintances and college peers. I met Mike through a mutual acquaintance and after several phone conversations, successfully solicited his participation in the study. In acknowledging the interview process as implicitly involving expectations on the part of the interviewee (Button 1987), as well as the interviewer, I made conscious attempts to present myself in a manner consistent with my prior informal interactions with the participants. Likewise, I didn't self monitor my speech and thus shifted naturally AAE and SAE.[7] Following the tradition of Labov's (1968) sociolinguistic interview, I asked the participants to respond to "danger of death" and "happiest moments" questions. Participants also discussed hip hop, their educational and career plans, the 1992 civil unrest in Los Angeles, and initiated other topics as well. The interviews ranged from 40-50 minutes.

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[7] This, of course, does not deny the definite, yet in this case unexploited, benefits to investigating the three participants' speech in a variety of contexts (Hymes 1979, Labov 1966). Unfortunately, the author can only claim to have conducted informal observations (non-audiotaped) of the participants' speech in various social contexts. The claims of this paper must no doubt be weighed against this limitation.

## 7. Quantitative Analysis

Given the current focus on the speakers' use of AAE grammar, the methodology used to tabulate copula contraction and deletion likewise reflects a more neutral formula, Straight Deletion and Contraction (cf. Rickford et al. 1991), rather than Labovian or Romaine formulas which have been employed in previous investigations of AAE's relation to African-based creoles and European based languages. Table 1 provides the participants' percentages of copula contraction and deletion according to the grammatical environments employed by Winford (1992), Rickford et al. (1991), Baugh (1980), and Labov (1969b; 1972b).[8] Note that Negative (___Neg) and Miscellaneous (___Miscel.) categories have been added in order to account for contracted and/or deleted copulas that occurred before not and ambiguous environments, respectively.

Of the three speakers, Ron displays the greatest percentage of copula deletions (.31), though his percentage of copula contractions (.29) are nearly identical to his deletions. In contrast, Greg and Mike have greater percentages of copula contraction (.43 and .64 respectively) than they do absence (.02 and .03 respectively). Across the board, both contraction and deletion are favored when a vowel constitutes the preceding phonological environment. Labov (1969; 1972) and Baugh (1980) found copula deletion to be favored in the following grammatical environments (ordered from least to greatest): ___NP, __AdjP, ___Loc, ___Ving, ___Gonna. With Ron, both contraction and deletion seemed to be most favored in ___Ving environments. Given the small number of tokens overall, it is questionable whether this slight deviation from Labov's findings is substantial enough to warrant an in-depth discussion. Contraction, though, is least favored in ___Loc environments while deletion is least favored in ___AdjP contexts. In Mike's case, contraction is most favored in ___ Gon(na) (.38) and ____AdjP (.25) contexts. Mike's contraction in ___Ving environments only represent 14% of his total percentage of contractions. Ron's use of copula contraction is most strongly favored in ___AdjP environments, with ___Gon(na) environments ranking second.

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[8] Following Rickford et al (1991), cases analyzed for copula variation included present forms of *is* and *are*, since *am* occurs in full or contracted form 99% of the time. Other Don't Count (DC) cases included nonfinite and past forms of the copula, as in (She will be here and She was here.) Additionally, tokens of the contracted is followed by a sibilant (He ∅ sick) were not counted since such sentences are phonetically difficult to distinguish from deletion and contraction in rapid speech. Copulas in exposed (i.e. clause final) and stressed positions were also not counted. Ron's DC cases totaled 291, Mikes DC cases totaled 294, and Greg's totaled 283. A large part of each participants' DC cases included nonfinite and past forms of the copula, as well as copulas in stressed and exposed positions.

For all three speakers, both contraction and deletion overwhelmingly follow personal pronouns (he, she, we and they). In the Person-Number category, there is greater variation among the three participants. For Ron, contraction of *is* and *are* occur at almost equal rates (.43 and .57 respectively). However, *are* constitutes the majority of Ron's deletion cases; they constitute 95% of the total number of deleted tokens. Mike's contractions of *are* represent 78% of the total number of contractions, while his *is* contractions only constitute 22%. His three cases of copula deletion involve the plural/2nd singular auxiliary. Finally, in Greg's case, *are* is contracted at a rate of .62, while *is* contractions occur at a lower rate of .38. Greg's two cases of copula deletion involve the plural/2nd singular auxiliary.

In addition to copula deletion, an analysis was also conducted of the speakers' use the habitual *be*, non SAE tense constructions, *stressed* and *unstressed been,* verbal -s, ed deletion, double negatives, /d/ and /t/ substitution for /th/, /ŋ/ reduction to /ɪn/, and /ay/ reduction to /ə/. None of the speakers employed *done* or the habitual *be,* though Mike used the future be in "I be driving down the freeway talking about WHY why did you do this to me!?" Ron displayed 11 cases of non SAE tense constructions, in contrast to Greg's display of two, and Mike's lack thereof. The use of the ***unstressed been*** occurred in Ron's speech four times, Mike's speech 3 times, and Greg's speech twice. Ron displayed

## Table 1: Copula Variation Across Three Speakers

| | RON (Anglo American) | | MIKE (African American) | | GREG (African American) | |
|---|---|---|---|---|---|---|
| | SC* | SD** | SC | SD | SC | SD |
| Preceding phonological Env | | | | | | |
| Consonant | 05 | - | - | - | 02 | - |
| Vowel | 95 | 1.00 | 1.00 | 1.00 | 98 | 1.00 |
| Following Grammatical Env | | | | | | |
| **NP** | - | - | .03 | - | - | - |
| **AdjP** | .07 | .05 | .25 | - | .32 | - |
| **Loc** | .05 | .02 | .06 | - | .12 | - |
| **Ving** | .27 | .17 | .38 | - | .22 | - |
| **Gon(na)** | - | .10 | .14 | .03 | .15 | - |
| **Neg.** | .10 | .07 | .02 | .02 | .12 | - |
| **Miscel.** | .02 | - | .06 | - | .05 | - |
| Subject | | | | | | |
| Personal Pronoun | 85 | 95 | 1.00 | 1.00 | 82 | 1.00 |
| Other Pronoun | 10 | - | - | - | 15 | - |
| Noun Pronoun | 05 | 05 | - | - | 03 | - |
| Person-Number | | | | | | |
| Plural/2nd Singular | 57 | 95 | 78 | 1.00 | 62 | 1.00 |
| 3rd Singular | 43 | 05 | 22 | - | 38 | - |
| **Overall Percentage** | .31 | 29 | .43 | .02 | .64 | .03 |
| **Total # of Tokens** | 41 | 41 | 63 | 63 | 41 | 41 |

* Straight Contraction, ** Straight Deletion

C=contraction, D=deletion, F=full

Straight Contraction $\frac{C}{F+C+D}$

Straight/Romaine Deletion $\frac{D}{F+C+D}$

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four cases of verbal -s and Greg displayed one case. Ron provided 7 cases of double negatives, all of which carried emphatic weight. Mike's single use of the double negative is also thought to have been used for emphatic purposes. At the level of phonology, Ron verbalized /th/, /ŋ/, and both /y/ and /er/ at a rate of 76%, 61%, and 53% respectively. Mike and Greg verbalized these variables at relatively higher rates.

Labov (1969b) has argued that AAE contraction and deletion show qualitative parallels and as such, it is not surprising that they are quantitatively parallel as well. Ron's contractions and deletions respond in parallel ways to following grammatical environment accordingly deem him an "authentic" AAE speaker. Greg and Mike, however, show very few quantitative parallels in their (relatively low) percentage of contractions and deletions. Following Labov (1972a), these speakers qualify as "lames" or marginal AAE speakers. Yet, to more fully appreciate the repertoire of social identities enacted through each participants' speech, (Kroskrity 1993), a discourse analysis of select speech samples is offered below.

## 8. Qualitative Analysis

Transcript 1 is an excerpt from two hours of Ron's speech that is marked by grammatical, phonological, and prosodic AAE features.[9]

**Transcript 1: Ron Excerpt** (NOTE: *Bold words and phrases represent an orthographic rather than phonetic representation of Ron's speech.*)

Lanita: Do you think it's going to blow up again?

Ron: Maybe not **dis** year. It'll definitely blow up again I mean
because like I said, without *real* changes, without *real*
*transformation* (.1) not just change but *tra:nsformation*

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[9] The majority of the interviewers' minimal responses to Ron's talk have been removed in efforts to focus more exclusively on Ron's use of AAE grammar and phonology.

(1) um the same things'll happen (.1) okay (.) you know (.) it's like (.1) and (4) see ↑**dis** recession isn't en:ding (1) okay **(.)** it's *not* (.) *gonna (.) end* because what you've ha:d with deregulation (.1) is (1) the really the *illu::sion* (.1) of a recession <now it's real for **us** who feel it (1) but the people that are the chairmans of the boards of Chrysler Corporation (1) they're still making *to::ns* of money off of **dis** (.) What they've done is **mo:ved dere** factories outta **da** country (.) employ people at low wages and they don't make and sell automobiles anymore (1) so it *looks* like they're struggling with **us** (1) but what they're doing is they're making the parts and <selling em to other automobile industry> who are *selling* more cars <okay what you ha:ve is you have a transnationalism like **nevah** before okay (.) >there's no difference between there's no separation between Honda and Chrysler and GM< <GM's **makin'** the parts that Honda uses to sell its cars! (.) People buy Hondas because of their reputation so GM >ain't even selling cars no more **they ∅ just making** the parts< (?)

Lanita: But you say that like that has somethin' to do with why

Ron: = <It has a lot to do [with the]

Lanita: [How so?]

Ron: = with the riot because what you have is you **wid wid da** rebellion, excu:se me but what you have is is um (2) you know the one way that this could be diffused was if there was jobs you know (.) and people could see rea:l changes, rea:l transformation (.) and but **you ∅ not gon have** that **dis** recession you know <you have all these politicians **talkin'** about *we* need you know *our our* urban plans and agendas (.) Weed and Seed and this and **nat** (1) Bill Clinton has an urban agenda and an inner city you know economic agenda (1) but if *you* don–if what has happened is (.1) through deregulation (1.) **there is no more better business practices (1)** okay **why ∅ the companies gon stay here?** It ain't about you know...

Ron's use of AAE is highly prosodic in nature. Ron employs rising and falling intonation, vowel lengthening, timing/rhythm, and high pitch (cf. Morgan 1996a) as he discusses the potential for future civil explosions in Los Angeles following the 1992 Rodney King verdict. Ron also uses collectivizing pronouns that align him with the residents of South Los Angeles.

Ron also uses several AAE grammatical features. Copula absence occurs three times, in line 24, 33, and 40-41 and coincides with Ron's emphasis on certain points, "They ∅ just making the parts," "But you ∅ not gon have that," and a question which draws the listener in, "Okay, why ∅ the companies gon stay here?" There is also one case of a double negative, "GM ain't even selling cars no more", and one case illustrating non-SAE tense construction, "There is no more better business practices. In contrast, there is a relative abundance of /n/ and /d/ substitution for the voiced alveolar fricative /th/.[10] Ron's limited use of AAE grammar and relatively high use of prosodic and phonological AAE features index an African American style which might likely key African American identity for survey listeners.

Ron's use of the African American prosodic system and his relatively limited use of AAE grammar here is not unlike his speech during our two interviews. In approximately two hours of speech, Ron liberally employs vowel lengthening, rhythm and tempo and high pitch yet very few grammatical tokens. Though space does not permit a lengthy delineation, it is significant that Ron also uses several African American lexical items (e.g., ballin' for basketball) and idiomatic expressions when telling a story, joke and while arguing a position.

In Transcript 2, Mike offers somewhat of an impromptu discussion of the 1992 civil unrest, as his exposition follows the interviewer's mere (yet emphatic) mention of the topic.

**Transcript 2: Mike Excerpt** (NOTE: Collectivizing pronouns have been bolded below.)

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[10] Many of these cases can be explained by their preceding phonological environments as in "What they've done is moved dere factories..." in line 12-13).

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1 *Lanita: ... U::m, the RECENT controversy in Los Angeles!*
2 Mike: Now You Know (1.) I have heard this described in so many
3 ways and I think the predominant term that everyone has
4 chosen to use (.) especially the mass media (.) is civil
5 unrest (2) I (.) don't (.) know (.) what (.) civil unrest
6 means (1) I I have no identity to that term (1) This was
7 clearly a riot (1) um and I think it is a riot that was the
8 result of not just this *one* isolated incident of Rodney
9 King (1) um I think this was a culmination of ye:ars of
10 oppression um within **our** community (1) um and I think
11 there was only so much that **we** could continue to take
12 (.1) as a group of people and as a community (1) and I
13 think the Rodney King Inc–incident was definitely a
14 catalyst but in no way caused the incident (1) I think it
15 was a riot because there was a certain level of destruction
16 associated with the entire set of occurrences that would
17 make it a riot and >simply saying civil unrest to me is like
18 this way of kinda making everything all right< (.) ***We can***
19 ***put a band-aid on this*** you know and ***we can smooth out***
20 ***the wrinkles*** and everything will be okay but in No Way
21 In Hell is this gon be okay by just identifying this as an
22 unrest (.) ***We're gonna come in*** **(1)** ***we're gonna get a***
23 ***give a few teenagers some jobs um we're going to***
24 ***create*** **(1)** ***maybe a few more um access*** (1) for some of
25 us into the establishment but basically things would
26 return will return to normal if **WE** meaning **we** as the
27 younger generations don't decide hey, this is not going to
28 occur again and if this means that **we** have to pull every
29 black politician out of their current office (1) if that
30 means that **we** have to pull all of ***our*** dollars out of white
31 banks and start **our** own foundations (1) if that means that
32 **we** have to invest solely in our **own** businesses so **we**
33 shop within the black community then that's what it takes
34 (1) um but in no way was this simply an unrest

In contrast to Ron, Mike's excerpt displays no cases of copula absence. Mike's most marked use of AAE occurs as line 21, "...but in No Way In Hell is this gon be okay by just identifying this as an

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unrest" where the contraction of gonna to gon carries emphatic weight and coincides with his assertion that band-aid type remedies are insufficient. Mike uses SAE grammar and phonology throughout much of his interview. His use of timing/rhythm, stress and vowel lengthening mark an emphatic African American style of speech (Morgan 1996a). Mike also illustrates command of the African American discursive style of marking in lines 19-20. He states sarcastically, *"We can put a band-aid on this"*..., thus rendering a negative opinion about politicians with patchwork remedies for social inequality. Like Ron, Mike's use of personal and genitive pronouns [we, us, our] serve to index his membership within the African American community.

Greg's excerpt, presented in Transcript 3, displays perhaps the greatest use of SAE grammar and phonology of all three speakers. As such, this excerpt is not atypical of his speech during our 45 minute interview. Here, I may have actually negotiated the use of a formal register through the contextualized and slightly formal nature of my inquiry.

**Transcript 3: Greg Excerpt** (NOTE: Collectivizing pronouns have been bolded below.)

Lanita: I meant to ask you about um your feelings um regarding
the rebellion Pat (a mutual friend of G & LJ) and I talked
to a lot of um students at UCLA A lotta people were
upset, um, and um some were just kinda nonchalant about
the whole issue how did it affect you?

Greg: U:m yeah upset would be an understatement in light of
the fact that half **my neighborhood** was burned down
um (1) How did I feel about it? To a certain degree I felt
sorry for you know (.) all the people that that Koreans
and so forth that got their their stores burned down <but I
understood why it took place and I understood that it it
was also not just a bunch of opportunists (1) you know (.)
tryna take advantage of that of uh current tensions (1)
There were people that had systematically planned to go
around and burn down burn out the Koreans should the
decision come back as it did y-know (1) So it you know

17 the whole thing made sense (1) It wasn't bullshit but it
18 made sense

19 Lanita: How did that um the verdict hit you initially?

20 Greg: (1) How did it hit me? U:h to a certain extent I expected
21 it but it was a joke you know (1) it was a slap in the face
22 then again **we've** been slapped so many times it uh you
23 know it's gettin' I guess **we're** kinda numb at this point
24 you know and /nen/ the watchakalit the new verdict I
25 mean the new trial with these four /brothes/ that's gonna
26 be another slap in the face cause they're gonna be found
27 guilty

As illustrated in the excerpt, Greg often fully vocalizes /th/ and the only case where /th/→/n/ can easily be explained by the preceding phonological environment ("...and nen the watchakalit..." [line 24]). Greg's use of collectivizing pronouns, does the most work in marking his potential membership within the African American community by aligning him with the plight of the African American residents impacted by the Rodney King verdict. Indeed he notes that "half my neighborhood was burned down" (line 7) which situates him within the affected communities. His use of "brothas" (pronounced /brʌθəs/) in line 25 also potentially signals his status as African American as this term is an in-group reference to an African American male

## 9. Survey Analysis

Ninety two people listened to the above excerpts and then provided ethnic and class assessments of the three speakers. Previous studies indicate that listeners make interpretations about a speaker's ethnicity, class background, and even personality on the basis of voice cues alone (cf. Harms 1961; 1963, Buck 1968, Shuy et al. 1969, Tucker & Lambert 1969, DeStefano 1971, Koustaal & Jackson 1971, Giles & Bourhis 1976, Johnson & Buttny 1982, Linn & Piché 1982). The earliest of these studies were conducted in laboratory settings and elicited listener judgments on such polar characteristics as whether a speaker is mean or nice, an athlete or a student, and white or black. As such, listeners seldom provided open-ended or extraneous responses that could yield deeper insight into their specific linguistic ideologies. In response to these perceived limitations, the current study involved face-to-face interviews in the survey participant s homes, college dormitories and campuses, and a variety of other social settings.

Survey respondents included university students and the interviewers' acquaintances, friends and family members. Respondents varied in terms of their age, gender, ethnic, geographical, and professional backgrounds. Survey respondents were asked, "What ethnicity do you think the speaker is," and in other cases, "Could the speaker pass as white speaking the way he does?" Survey participants also responded to the question, "What class background would you say the speaker is from (upper, middle, lower or any variation in between)?" Many respondents also speculated on the potential age, educational level, and the political orientation of the three speakers. Survey participants were encouraged to listen to both the sound and the content of the speech samples in making their assessments. Following their responses, the interviewer revealed the ethnic and class backgrounds of the three speakers, which often elicited insightful comments and questions about the three speakers, particularly Ron.

Survey administrators included two African American females and two white males, all college students.[11] Of the 92 survey respondents, 45 (49%) were African American, 33 (36%) were Anglo American, 8 (9%) were Latino, and 6 (7%) were Asian American. Males constitute 59% (54) of the entire sample, and females make up the remaining 41% (38). Additionally, the respondents ranged between 10-45 years in age, though the majority, 83%, were between 16-25 years old. Table 2 provides African American and Anglo Americans' assessments of the ethnicity and class background of Ron, Mike and Greg.[12]

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[11] I am indebted to Jason Baker, Jason Schiffman and Jocelyn Henry for assisting in the collection of these surveys.

[12] The few times when survey participants questioned which attribute to weigh most heavily, they were admonished to consider sound first, and then content.

Table 2: Race & Class Assessments of Speakers

| Race & Class Assessments | RON (Anglo American) | MIKE (African American) | GREG (African American) |
|---|---|---|---|
| **AFRICAN AMER.** | 92% | 92% | 85% |
| *Low* | **48%** | 1% | 4% |
| *Low-Mid* | 18% | 1% | 16% |
| *Mid* | 22% | **40%** | **49%** |
| *Upper-Mid* | 3% | 30% | 12% |
| *Upper* | 1% | 20% | 3% |
| **ANGLO AMER.** | **5%** | **7%** | **15%** |
| *Low* | 3% | 1% | 1% |
| *Low-Mid* | - | - | 1% |
| *Mid* | 1% | 5% | 13% |
| *Upper-Mid* | - | 1% | - |
| *Upper* | - | - | - |
| **UNSURE** | **3%** | - | - |

According to the linguistic analyses presented above, Ron appeared to be an "authentic" AAE speaker, while Mike and Greg's speech was more similar to SAE. In a manner commensurate with these findings, 92% of the survey respondents classified Ron as African American. Only two respondents assessed Ron as white and another two respondents were undecided.[13] However, though a linguistic analysis of Mike's

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[13] One African American (female) who classified Ron as white and middle class commented, "He's slipping with his accent. You *know* when it's shaky!" This survey participant echoed the classic characterization of Ron, "He's a white boy tryna sound black."

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speech placed him closer to SAE, 92% of people surveyed classified him as African American, while only 7% classify him as white. Greg, whose speech was thought to be the most closest to SAE of all three speakers, is classified as African American by 85% of the people surveyed. Greg was classified as white by 15% of the survey respondents. In terms of class rankings, Ron is perceived as lower class by 48% of survey respondents, while Mike is overwhelmingly considered to be middle to upper class (according to 90% of survey respondents). Sixty-four percent of the survey respondents considered Greg to be middle to upper-middle class, while 16% classified him as lower to lower-middle class.

### 9.1. Ron

Ron's use of an adolescent variety, marked most strongly by his use of African American prosody (i.e., rhythm and tempo and timing and pitch) and phonology, convinced many respondents that he was a lower to lower-middle class African American speaker. Fifteen respondents were quite adamant in their classifications, rendering assessments such as, "He's black!" and "He's *definitely* a brotha'!'" Yet a substantial majority of the people who classified Ron as African American also found his speech over-performed to some extent. For example, several respondents stated that Ron sounded inauthentic, as if he was *trying* to sound intelligent or to sound white (Frazier 1957). Several others compared him pejoratively to the rapper and actor Ice-T and the parodied nonsensical inmate of the former popular television comedy, *In Living Color.*[14] Additionally, two African American respondents assumed that Ron might be mixed with black and white, and *hence* ambivalent about his ethnic identity. For these respondents, Ron's alleged bi-racial identity triggered his alignment with a "militant" (Afro-centric) perspective and

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[14] Of several respondents who laughed immediately upon hearing Ron's voice, one joked, 'Dude got lyrics!' and another comments, 'He sound like Ice T, but he can back up his words.' Ironically, though, Ice T is from a middle class background who is a successful rap artist because of his use of AAE.

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(over)performance of AAE. This findings resemble Dillard (1977) and Baugh's (1987; 1992) research on hypocorrection among middle and upper middle class African Americans. Others survey participants commented that Ron sounded southern or "country," which Mitchell-Kernan (1969) describes as a term which is constructed in opposition to "proper" or "good" English (cf. Lawrence 1977). Those respondents who described Ron middle to upper class and African American (26%) often did so on the basis that Ron "sounded educated."

What are we to make of the Ron's overwhelming classification as an African American and respondents qualified suspicions? Part of the reason why survey assessments of Ron are contextually ambivalent is that he employs an adolescent African American variety that is replete with prosodic and phonological markers to argue, in my opinion rather cogently, a liberal position with respect to improving economic and social conditions for African Americans. In this sense, Ron comes off to listeners as educated, yet his speech variety serves as a point of contention. In essence, Ron's speech variety serves to marginalize his status within the AASC.

Further, Ron's identity as constructed for listeners through his excerpt does not mesh well with conceptions of middle class speakers within the African American community. As Since socioeconomic class is more often determined in the AASC by an individual's real or perceived educational status versus income (Morgan 1994a), Ron's message serves to signal his status as an educated speaker. Yet the adolescent speech variety Ron employs is stigmatized and as such, compels listeners to classify his as either lower-class or to align him, in a linguistic and metaphorical sense, with the black middle and upper class college students who tended to hypocorrect or over-perform AAE. For many, Ron's stereotypical use of black affect is most convincing in marking him as lower-class African American. For others, Ron's message content is suspiciously awkward as to suggest that he may be bi-racial (which for some respondents meant confused about his ethnic identity) or a militant African American who felt the need to perform his identity by speaking a stereotyped variety of AAE.

When Ron was assessed as white, as he was by an African American, Asian American, and two Anglo Americans, a respondent commented that his speech was a bit "shaky" and two respondents speculated that Ron was a lower class white male who was socialized in a black environment. Of the two respondents (African American and Anglo American) who were undecided about Ron's potential ethnic identity, one alleged, "He [Ron] could be anything because he's trying too hard." This comment also seems to characterize the sentiments of those who classified Ron as African American but still felt his speech was inauthentic in some way (e.g., some felt Ron's speech was over-performed, rambled, etc.)

### 9.2. Greg

Greg's relatively limited use of AAE grammar, phonology and prosody served, for many African American respondents, to signify his lack of racial consciousness. Thus, Greg was characterized several times as an African American who was estranged from the black community, despite the fact that Greg begins his excerpt by placing himself within the African American communities which were burned during the 1992 civil disturbances and uses genitive pronouns "we" and "us" when referring to African American residents. African Americans, as well as an Anglo American respondent, who identified Greg as African American assessed Greg as a "wimp," "black but he's a nerd," "white-washed," and accused him of "talking white."[15] The

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[15] Interestingly, this accusation is one which Greg discussed in our interview. Having been accused of "talking white" by several women at clubs, Greg was compelled to shift his discursive strategies away from more "educated" speech to what he called, "ghetto gear." In the following story about his experiences at a club, Greg comments on his conscious situational codeshift to an African American style of speech and his strong disdain for being accused of talking white: "... *If you plan on getting out on the dance floor, you have to use common sense and you have to communicate with the person that you're talking to. You .. talk to someone that's ghetto in a certain way, you're not communicating cause the communication process is not taking place because they can't relate to that. I had someone tell me .. I came I was kickin it I was really in ghetto mode one night and I was kickin it. I had a toothpick in my mouth ... I was*

African, Asian and Anglo Americans who classified Greg as white and middle class often attributed it to the fact that he sounded educated and used big words. When Asians and Anglo Americans classified Greg as black and middle class, many commented that he sounded educated or eloquent.

### 9.3. Mike

Mike was predominantly classified as African American and middle to upper class. Many respondents commented that he was very well spoken and used "good words." In his excerpt, Mike verbalizes his preference of the term "riot" over "civil unrest," takes an assertive stance against politicians, and then calls for community action. His problem-solution based exposition impressed several African American, Asian, and Anglo respondents to give him a middle to upper class rating. Many of these respondents felt that both his use of language and the maturity of his ideas reflected a certain class background. In two cases, however, Mike's preference for the term riot aroused negative feedback from AAE speakers who considered him to hold little affinity to the African American community. In two other cases, Mike was initially thought to be white. Yet, as survey respondents continued to listen to the *content* of his speech, they reclassified him as African American. Additionally, some African Americans who identified Mike as African American and middle to upper class also remarked that he sounded "white washed," "militant as though he was mixed with black and white." and

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*in that frame of mind so I had a toothpick in my mouth kickin back um .. I was talking to some woman in the club and she ... had the nerve to call me white and I was thinking What! White. Now I happened to be in (name of club) and I forgot where I was and I was talking to her like I'm talking to you as opposed to talking to her like I'm talking to a (name of club)-woman. So she kind've assumed oh well he must be a oreo, why is he talking to me so proper? So white. So you know you have to be aware of that because you call me white and I'm pissed off because I'm very far from being white ... So I don't think I don't really appreciate that comment you know. I didn't appreciate it at the time so you know .. and because I don't like to get comments like that, I try to avoid talking to certain people in a certain way.*

speculated that he interacted regularly with Anglo Americans. Overwhelmingly, Anglo Americans provided positive assessments in their classifications of Mike as African American and middle to upper class. Of the nine Anglo respondents who provided comments, six commented that his speech was "eloquent" and that Mike was "obviously intelligent" and one stated that Mike reminded them of the basketball player Scotty Pippen. Mike was assessed as Anglo American by three African American, three Anglo-American and one Latino respondent. Of the two African Americans who provided comments, one was initially undecided, but stuck with an Anglo American classification and the other remarked that he was "more articulate."

## 10. Summary

These findings challenge traditional descriptions of AAE speakers as either "lames" (Labov 1972a) or authentic speakers (cf. Labov 1980). Though linguistic and discourse analyses present Ron as an authentic AAE speaker, survey responses reveal his marginalized status in the AASC. Additionally, while Mike is considered to be a marginal AAE speaker by linguistic standards, he is by and large considered to a competent AAE speaker by survey respondents and through discourse analysis.

Butters (1994) argues that because AAE speakers, particularly non-adolescents, tend not to exploit the entire range of grammatical features of AAE in their speech at any one time, linguistic descriptions of speakers can easily end up producing "lame" AAE speakers at best or, as Ron illustrates, present speakers of an adolescent AAE variety as "authentic." Yet, as Morgan (1994a) argues, though AAE is symbolic of ethnic loyalty and pride for many African Americans, this does not preclude their appreciation nor use of SAE. In fact, the ability to speak SAE is viewed within the AASC as a way to negotiate one's economic success in a society which continues to marginalize African American discourse styles. It is only when SAE is the only code used by African American speakers that their status within the AASC risks marginalization. Likewise, Greg, whose speech was shown via linguistic and discourse analysis to be most closest to

SAE, is seen by many African American respondents as having a low sense of racial consciousness—despite his expressed membership and alignment with the African American community.

These findings also implicate the politics of language, identity and (linguistic) ideology for members the AASC. After survey respondents discovered the Ron was white and from a middle class background, many were extremely critical of him. For many African American critics, the fault lay within his [and other white speakers' of AAE] failure to acknowledge the privilege associated with such linguistic *ethnic options* (cf. Waters 1990). For example, several respondents noted that, unlike themselves, Ron could switch to white (begin speaking SAE) at anytime and enjoy the privileges thus associated (cf. Royce 1982, Woolard 1988, Waters 1990, Kroskrity 1993).

## 11. Conclusion

In replicating Hatala (1976) and Labov's (1980) assessment of Carla, this paper has critiqued notions of an "authentic" African American speaker and speech community which are based primarily upon linguistic analyses. In exploring both the speech behavior of Ron and listeners' assessments of Ron, this paper has exposed the inadequacy of linguistic models that associate "authenticity" with an adolescent speech variety. Similarly, Mike's speech behavior and listeners' assessments of Mike serve to problematize the use of "lame" to describe AAE speakers who do not use adolescent varieties across a variety of social contexts. Listener responses which were antagonistic of Greg's primary use of SAE indirectly indicate the role of AAE as a symbol of racial and cultural consciousness for members of the AASC. Thus, in addressing the questions of *Who speaks AAE?* and *What does it mean to speak AAE?*, this paper has advocated the utility of quantitative and qualitative forms of analyses to describe the linguistic and social complexity characterizing AAE speakers and the AASC.

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# Yorkville Crossing: a Case Study of the Influence of Hip Hop Culture on the Speech of a White Middle Class Adolescent in New York City

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## 1. Introduction

This paper revisits Hatala's (1976) study on Carla, a 13 year old white girl who was thought to speak African American vernacular English. Labov (1980) argues that Carla is not an authentic speaker of AAVE because she only acquired a subset of phonological and prosodic features. In this work I look at the speech of a white 16 year-old boy who, like Carla, demonstrates the use of many phonological and lexical features but lacks the tense and aspect system of AAVE. However there are some important social differences between Mike and Carla: Carla grew up in a overwhelmingly African American neighborhood and school environment in Camden, New Jersey, whereas Mike lives in a luxury condominium on Park Avenue in New York City and attends an exclusive private high school. Carla's friends were mainly African American. Most of Mike's friends are white. While Carla's adoption of AAVE features may have reflected an effort to adapt to her environment, Mike's linguistic behavior begs another explanation. As Tricia Rose writes, whites are "fascinated by [black culture's] differences, drawn in by mainstream social constructions [of black culture]... as a forbidden narrative, [and] a symbol of rebellion" (1994:5). Thus the conscious adoption of African American speech markers is an attempt by young middle class whites such as my informant to take part in the prestige of African American youth culture. In the following pages I shall discuss the role of hip hop culture in the motivations of young whites like Mike to adopt AAVE features in their speech, present linguistic evidence that his target is indeed AAVE, and discuss some of the possible explanations for why now — at the age of 16 — his use of AAVE features has begun to decrease. The analysis draws heavily on Roger Hewitt's work on white creole use in Britain (Hewitt 1986), as well as Rampton's "language crossing" model (Rampton 1995).

## 2. Background

Mike is the is son of a close friend of mine. I have watched him grow up from the age of six. He is a tall, blond, sociable young man. Like many of his peers he has suffered through the divorce of his parents and this has probably contributed to some of the social problems he has had in recent years. I have been passively observing his language practices since 1992 when he was about 12 and began collecting data in late 1995 when Mike was 15 years old. At around age 12, Mike began to identify with "hip hop" culture. He wore baggy jeans, a reverse baseball cap, shaved head, designer sneakers, and developed a taste for rap and hip hop music — a *wigga* or *white nigga* by Smitherman's definition (1994;168).[1] At around the same time he began to change the way he spoke. This was commented on and often ridiculed by family members who said he "sounded like a street kid or hoodlum." One incident in particular marks his early attempt at imitating AAVE. During a phone call with his best friend, Mike demonstrated a quick conversational repair to a typical AAVE form.

*1) (age 13) Observed by Cutler, Mike's mother and older brother as Mike spoke to a friend on the phone:*
Mike: I gotta ask, I mean AKS my mom.

In his description of young people in South London, Hewitt (1986) shows that some white adolescents in primarily white neighborhoods pass through a phase "in which they display their cultural allegiance with blacks" (1986:159). In Mike's case this manifested itself among other ways in vocal criticism of groups he considered anti-African American. He accused his mother of racism when she affectionately referred to one of his African American friends as "el negrito." (His mother is from Madrid, Spain). He was ashamed to live on Park Avenue and pretended to live in Brooklyn by giving out his older brother's Brooklyn phone number.

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[1] Smitherman describes a wigger or white nigger as 'an emerging positive term for white youth who identify with hip hop, rap and other aspects of African American Cultures.' She goes on to say that 'throughout U.S. history, there have always been wiggas, and particularly in the twentieth century. In the 1950s, white writer Norman Mailer dubbed them "white Negroes." Their numbers are significantly larger today than in previous generations because of the exposure to African American Culture made possible by television' (1994:168).

Mike's perception of "hip hop" and consequently the way he expressed his identity in his early teenage years were closely bound up with gang culture. He often went "tagging" [scrawling graffiti] with his friends, began experimenting with drugs, and had run-ins with the police. At the end of his freshman year in high school, a 'friend' pushed Mike through a glass door, cutting through several tendons and a nerve in each wrist. After surgery and five weeks of recovery in bed he went out to Central Park against the doctor's orders where a group of rivals (perhaps gang members) held him down and broke his arms with baseball bats. It is well to mention here that most of the kids involved in these incidents were white. Mike's mother desperately hoped that these experiences would scare him into a more passive lifestyle but this was not played out immediately. He continued to see the same friends and was ejected from the French school he had attended since kindergarten at the end of his freshman year.

Now at age 16, Mike has modified his behavior somewhat. He is happier at his new school, gets passing grades and is thinking about SATs and college. He is much more likely to use standard English forms in formal settings, but continues to use characteristically AAVE phonological and lexical features around many of his friends. Hewitt (1986) found that creole use by whites in South London is restricted to adolescents and that most white teenagers eventually cease using creole at about the age of sixteen (1986:193). In light of Mike's recent attitudinal changes it will be interesting to see how long he continues to employ AAVE speech markers in the years to come

## 3. Data Collection

The data consists of individual interviews, group sessions and participant observation. In November, 1995 when he was 15, I asked Mike if he would like to be part of my study on teenage attitudes and behavior. He had recently seen the film "Kids" and imagining I was doing a similar project, was eager to take part. I initially recorded some one-on-one interviews. Several weeks later, I was able to tape some group sessions with several of Mike's friends who were incidentally all white. Most recently I loaned Mike the tape recorder upon his suggestion so he could record some sessions with his friends. These sessions are characterized by some

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self-conscious addressing of the microphone interspersed with animated, unconscious interactions among Mike and his friends against a backdrop of "hip hop" and "techno" music. I base my analysis on approximately six hours of recorded material.

## 4. Linguistic Observations

Table 1 below outlines many of the linguistic features identified by Wolfram & Fasold 1974 and Labov 1972a as characteristic of AAVE. Labov 1972a, Labov 1980; Labov & Harris 1986; Ash & Myhill 1986 have all commented on the relative ease with which outsiders can acquire superficial phonological and lexical features of another dialect versus the difficulty of acquiring the grammar — a situation which is born out in Mike's speech as well. As we can see in Table 1 most of the elements in Mike's speech which compare to AAVE are phonological. Of these the most common features are stop pronunciation of word-initial dental fricatives, post-vocalic, pre-consonantal r-lessness, voiced dental stops before nasals, absence of final dental stops, and off-glide absence. Many other vernaculars ,in New York City possess some of the same phonological variations so we must also take into consideration the presence of lexical and grammatical features in Mike's speech before determining what his target actually is. Hewitt 1986 in his study on young people in South London observes the predominance of Creole features in the local youth vernacular. A similar phenomenon may be at work in the U.S., allowing adolescents of diverse ethnic backgrounds access to black linguistic forms without the risks inherent in outright appropriation.

Mike uses none of the grammatical features of AAVE with any regularity as shown in Table 1 though some do appear occasionally in his speech. The most notable examples are his occasional use of the past perfect in narrative style, concord with forms of "be", negative concord, question inversion, left dislocation, and demonstrative alternation. In line with the studies mentioned above on dialect acquisition, Mike has not acquired any of the salient features of the AAVE grammatical system such as third singular -s absence, invariant "be," or regular copula deletion. In Figure 1 below, three phonological variables observed in Mike's speech are compared to data gathered on African American and white speakers for the same variables. The data on Mike comes from random samples of his speech in which I counted tokens of each variable for the duration of one side of the tape

Table 1

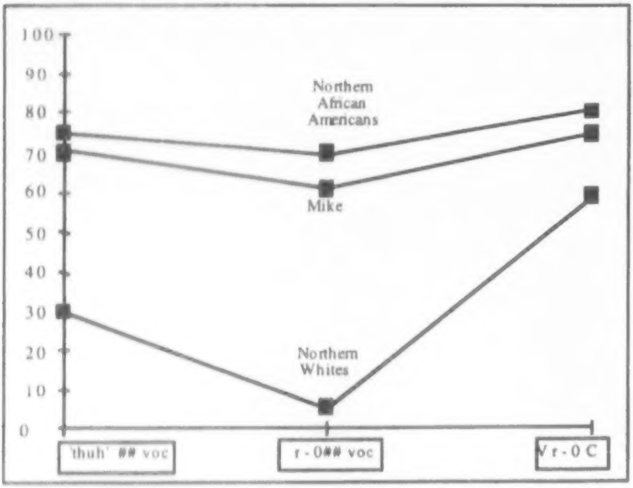
Presence of AAVE Features in Mike's speech

| ***AAVE Features*** | ***Frequency of Observation*** | | |
|---|---|---|---|
| ***Phonological Features*** | ***Common*** | ***Occasional*** | ***Never*** |
| cons. cluster simplification ## voc | | | ✓ |
| stop pron. of -voi dental fricatives | ✓ | | |
| stop pron. of +voi dental fricatives | | ✓ | |
| post-vocalic *r*-lessness | ✓ | | |
| post-consonantal *r*-lessness | | ✓ | |
| post-vocalic *l*-lessness | | | ✓ |
| voiced dental stop before nasals | | ✓ | |
| absence of final dental stops | | ✓ | |

| ***Grammatical Features*** | ***Common*** | ***Occasional*** | ***Never*** |
|---|---|---|---|
| irregular past-tense forms | | | ✓ |
| past-perfect tense in narrative style | | ✓ | |
| completive aspect with *done* | | | ✓ |
| the remote time aspect with *been* | | | ✓ |
| absence of third person singular *-s* | | | ✓ |
| concord with forms of *be* | | ✓ | |
| invariant *be* | | | ✓ |
| use of *ain't* for SE *didn't* | | | ✓ |
| use of *ain't* for SE *am not, isn't, etc* | | ✓ | |
| negative concord | | ✓ | |
| negative auxiliary preposing | | | ✓ |
| question inversion | | ✓ | |
| left dislocation | | ✓ | |
| absence of possessive *-s* | | | ✓ |
| demonstrative alternation | | ✓ | |
| auxiliary deletion *(have)* | | | ✓ |
| auxiliary deletion *(will)* | | | ✓ |
| copula deletion | | | ✓ |

Figure 1

Comparison of Three Phonological Variables



(approximately 15 minutes for each variable). As we can see in the graph, Mike's speech follows that of northern African Americans more closely than northern whites across these particular variables. Each of the variables as well as the data and other phonological features are discussed below.

## 4.1. Phonological Features

### 4.1.1. Schwa Pronunciation of 'the' Preceding a Vowel

The data for whites and blacks on the schwa pronunciation of 'the' comes from Sharon Ash and John Myhill (1983) "Linguistic Correlates of Inter-Ethnic Contact," from the Twelfth Annual Conference on New Ways of Analyzing Variation in Sankoff (ed.) 1986. Ash and Myhill compared the speech of 24 blacks and 5 whites (who had extensive contact with blacks) across three

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phonological and four grammatical variables. In standard English the pronunciation of the word "the" varies according to the first letter of the following word. "The" is pronounced [ðə] if a consonant follows and [ðɪy] if a vowel follows. Many AAVE speakers use the schwa pronunciation everywhere (Wolfram & Fasold 1974:146). Mike uses the schwa pronunciation in approximately 70% of the pre-vocalic instances in one sample as compared to 30% among the whites studied by Ash & Myhill (1983). Extract 2 is an example of this.

2) *Schwa Pronunciation of 'the': 7/10 70%*
Mike: Dass the other side that fucks it up.
[dæs ðə əðə saɪd d et fuks ɪt əp]

### 4.1.2. R-lessness: (r ## V; VrC)

The data on inter-vocalic and post-vocalic, pre-consonantal r-lessness for blacks and whites comes from Labov 1972a:39 where the social and stylistic stratification of average (r) indices for BEV and WNS groups are compared.[2] The six white adolescents in the Labov study were all from Inwood, a working class neighborhood in upper Manhattan. These white working class speakers showed very similar pronunciation of (r) to blacks except in the r##V environment. Labov comments that the "Inwood group shows very little vocalization of word-final (r) when the next word begins with a vowel, but for all of the black groups the vocalization rule operates here at least 50% of the time" (1972a:40). Labov notes that even white r-less New Yorkers pronounce an (r) when followed by a vowel as in *four o'clock*, but that for many in the AA speech community, "(r) becomes a glide or disappears in this position" (1972a :13). Mike demonstrates a generally high rate of post-vocalic (r-0) in spite of the fact that he was not r-less before about the age of 13 and neither are any of his family members. Most impressive is his rate word final (r-0) when followed by a vowel at a word boundary. In a sample of Mike's speech, 11 out of 18 tokens were (r-0) in this environment, (61%), which comes closer

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[2] It must be granted that Labov's data is nearly 30 years old and although it's unlikely that a replication of his study would yield identical results, there is more recent evidence suggesting that intervocalic, and post-vocalic pre-consonantal r-lessness are still very much a part of AAVE as in Baugh (1983).

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to Labov's Black Working Class speakers who average 60-80% (r-0) than to white New York City vernacular speakers at only 5-10% in the same environment (Labov 1972a:39). Extracts 3 and 4 are examples of the two (r-0) environments discussed above.

*3) Vocalization of word-final /r/ preceding a vowel: 11/18 tokens = 61%*
Mike: Yo, she still looks her age.
[jo ʃi stɪl luks hə eɪj]

*4) Post-vocalic, pre-consonantal /r/: 20/27 tokens = 74%*
Mike: Yo man I'm pumped up for this party tonight!
[jo mæn aim pəmt əp fo ðis pɔːdi tənait]

### 4.1.3. Stop Pronunciation of Dental Fricatives

I observed two types of stop pronunciation of dental fricatives in Mike's speech: voiced dental fricatives in articles and demonstratives such as 'the', 'this', 'those' etc., and of voiceless dental fricatives as in the word 'with'. In one sample the stop pronunciation of voiced dental fricatives in word initial position reached 36%. Approximately 50% of the word final voiceless dental fricatives in the word 'with' were voiceless stops. Extract 5 below is one such example.

*5) (age 15; 1995)*
Mike: nuh...yeah, but I had to verify DUH SHIT WIT YOU.
[nə jɛ bət ai hæd tə vɛrɪfai də ʃɪt wɪt tcu]

### 4.2. Grammatical Features

Research by Labov 1972a;1980, Labov & Harris 1986 and Ash & Myhill 1986 on the grammar of AAVE shows that it possesses some unique and predictable grammatical rules which set it apart from other English dialects. Labov's work on non-African American speakers who appear to have acquired the AAVE dialect suggests that they rarely acquire many of these grammatical features. The discussion of "Carla" typifies this pattern by suggesting that she was mainly able to 'sound black' through effective use of stress, pitch, tempo, and certain syntactic, lexical and prosodic features while displaying infrequent use of the AAVE tense and aspect system (Labov 1980). This is not to say that a non-African American are not able to learn AAVE grammar. Indeed the white informant "Ron" discussed by Jacobs-Huey's (1996) demonstrates a higher rate of copular deletion than either of the African American informants in the study.

My informant, like Carla, has a limited range of AAVE grammar features, the most common of which is the use of the past-perfect in place of the simple past, e.g. *I had done that* where SE would demand the simple past form *I did that.* His use of *ain't* conforms to the type most commonly used by non-African Americans, i.e., in place of *am/is/are* not or *have/has* not instead of *did not* as in Extract 6.

6) *(age 15; 1995) Conversation between Mike and friend.*
Mike: ((CLICK)) YO, don't worry about NUTTIN' BRO. IT AIN'T SHIT.

I even found a few cases of copula deletion but it would be hard to make any claims about Mike's knowledge of this feature from so few tokens. Extract 8 is arguably an idiomatic expression which many non-AA teens have incorporated into their vocabularies.

7) *(age 16; 1996) Group session: Mike and friends are playing strip poker:*
Mike: What up? What up?

"For Northern urban Vernacular Black English, the rule that restricts 'is' to third-person singular subjects seems to be variable" (Wolfram & Fasold 1974:157). Mike occasionally demonstrates this non-standard features as shown in the example below although it is not a part of his everyday speech.

8) *(age 16; 1996) Group session: Mike and friends are playing strip poker:*
Mike: These niggas IZ got shoes on!

Over all the relative dearth of grammatical features in Mike's speech seems to confirm the findings of Labov 1972a, Labov 1980; Labov & Harris 1986; Ash & Myhill 1986 regarding the difficulty of acquiring AAVE grammatical features for non-native speakers. The examples listed above (no.s 6-8) suggest that Mike is at least aware of certain features of AAVE grammar whether or not he produces them on a regular basis.

### 4.3. Lexical Features

Although the use AAVE terminology alone does not serve to define someone as an authentic speaker, the adoption of AAVE lexical items by whites is an intriguing phenomenon. In spite of the stigma attached to AAVE in white society, "the language of black youth culture is in fact a 'prestige' variety amongst many young people" (Hewitt 1986:102). Mitchell-Kernan (1972) and Folb (1980) have documented the existence of generational languages and dialects among young African Americans. According to Fasold, expressions from these generational dialects "...generally follow a fairly rapid cyclical pattern in which they arise in the AA community, are adopted by 'hip' young whites, then by establishment liberals, and finally pass on into fairly general use" (1972:3).

Table 2

A Sampling of Hip Hop Vocabulary

| | | | |
|---|---|---|---|
| ayite | 'all right' | ill | 'wierd, obnoxious' |
| b; bee | 'friend' | i'mo | 'i'm going to' |
| beef | 'problem' | ma | 'mother' |
| bitch | 'woman' | mad | 'very' |
| booty | 'buttocks' | mo' | 'more' |
| bro' | 'brother, friend' | nah | 'no' |
| buggin' | 'going crazy' | nigga | 'fellow black brother' |
| chill | 'calm down' | phat | 'good, great' |
| crib | 'house' | sister | 'sister, black woman' |
| dat shit | 'that shit' | steppin' to | 'aggressively approach' |
| dope | 'good, great' | | |
| down | 'in agreement' | whassup?;<br>what up? | 'what's up?' |
| fine | 'sexy, hot' | | |
| fly | 'good, great' | word up | 'for real; in fact' |
| frontin' | 'showing off' | y'all | 'you all' |
| g; gee | 'friend' | yo | 'hey you' |
| hell yeah | 'yes indeed' | you know? | 'Do you understand?' |
| herb | 'nerd, loser, geek' | whack | 'great, excellent' |
| homey | 'friend' | word | 'really; for real' |
| hoochie | 'woman' (pej.) | | |

Limited use of AAVE forms among white youth is very wide-spread but the appropriation of AAVE lexical items into the everyday vocabulary of whites thereby rendering these forms unmarked with regard to ethnicity must be distinguished from the use of marked forms where social or ethnic information is associated with a particular speech item (Hewitt 1986:127). Clearly what is regarded as marked or unmarked with regard to ethnicity may differ from group to group or from one locality to another. Some of the most common lexical items and expressions from mid-1990s African American youth culture as reported by "The Laughing Pit Home Page Rap Dictionary Vol. 1" on the WWW are listed in Table 2 below. I would argue that most of these items are recognized as ethnically and socially marked as part of the African American rap/hip hop music scene but that many are becoming less so. Mike was able to accurately define but not explain the origins of most of the items on the list and most were observed in his casual speech.

As Hewitt (1986) aptly points out, any "quantitative analysis of lexical evidence is notoriously difficult and probably inappropriate, due to the relative infrequency with which most words are used" (1986:130). What can be noted is the frequency that certain items appear in relation to others. In the excerpts below we see a few of the items which appear frequently in Mike's vocabulary. The lexical items in question appear in upper case letters.

*9) (age 16; 1996)*

Mike: You ever hear of Frank Frazetta? Dis is some PHAT SHIT YO. YO, when the dude dies, dis book will probably be worth like a thousand dollars. Yo, tell me THAT SHIT is not PHAT!

*10) (age 16; 1996)*

Mike: Dis is gonna sound MAD weird YO. Don't worry, don't worry. I'll put THE SHIT off!!! Don't touch it. CHILL, don't touch it!! Don't touch it!!! I got this over here!

*11) (age 16; 1996)*

Mike: Look at this, NIGGA! What the fuck is this?!...Put yuh pants down! NIGGA, look at these NIGGAS. CHILL! CHILL! CHILL! Shut the fuck up! Look at these NIGGAS over here. These NIGGAS iz got shoes on. This NIGGA'S got shorts on. He's got a hat on. Yo y'all NIGGAS have like ten times more clothes than me on.

*12) (age 15; 1995)*
Mike:...YO, he better know some BOMB BITCHES down there!!

*13) (age 16; 1996)*
Mike: ((singing with a Jamaican accent)) ...let me tell ya 'bout Maxi, ya gonna say I don't know what I know, but murder she wrote, murder she wrote, murder she wrote, murder she wrote...yup, huh, huh, huh, hup, dah, huh, huh...what cha gonna do, what cha gonna do....AYITE, AYITE!!

Of all the marked terms appearing above the most interesting is probably the Mike's use of *nigga* [nɪgə] to refer to a white friend. Smitherman (1994) lists several alternative definitions ranging from an "African American" in general to a generic term for a "Black man", to a "rebellious, IN-YA-FACE Black man" but nowhere can it refer to a white person (1994:167). White use of has according to Smitherman "created a linguistic dilemma in the crossover world and in the African American community" (1994:168). She refers to the on-going controversy about "whether or not whites can have license to use the 'N-word' with the many different meanings that Blacks give to it" (1994;168). The fact that the term *nigga* is still marked is reflected in the fact that most whites are still very sensitive about using it. Mike denies using the term and never uses it around his mother or older brothers. Yet white teens, including Mike as well as young people from a range of different ethnic backgrounds, use this term routinely to refer to their friends in informal settings. Clearly this issue raises questions about the motivations of young whites to appropriate such loaded language, and the extent to which African Americans are aware and accept whites using the term *nigga* to refer to their white friends. The subject is certainly worthy of more attention than can be given here.

## 5. AAVE Acquisition by White Teenagers

Young people in New York City have the opportunity to observe first hand a variety of linguistic forms in subways, on street corners, in parks, night clubs etc. Mike spends a great deal of time outside 'hanging out' with his friends where he comes into contact with kids from 'uptown' (Harlem and the Bronx), 'downtown' (lower east side), and Brooklyn. Some of his favorite social activities, tagging, playing pool, drinking beer on the street with friends and going out to clubs on the weekends bring him into contact and conflict with kids from other neighborhoods and ethnic or social groups. One white friend in particular who lives in a lower east side project has been something of a social and linguistic role model for Mike. This young man attended French school with Mike when they both were children but was suspended a few years before Mike for poor academic performance and disciplinary problems. His speech patterns are closer to that of New York City African American and Hispanic teenagers than to local white vernacular and standard English speakers. Hewitt (1986) points out the "Janus-like" role of such whites whose contacts with African American culture make them a beacon for its promotion "amongst white youth" (1986:144). In this way words and expressions spread to white adolescents who have little direct contact with African Americans.

The other significant source of Mike's AAVE acquisition has been I believe rap music. Ever since "Yo! MTV Raps" went on the air in 1989 sales figures for rap music among middle class white teenagers have sky-rocketed (Rose 1994). "Rap music videos have animated hip hop cultural style and aesthetics and have facilitated a cross-neighborhood, cross-country (transnational?) dialogue in a social environment that is highly segregated by class and race" (Rose 1994:9). The inclusion of lyric sheets in CD cases allows the listener to read and then learn the latest expressions coming out of New York City, Oakland, and Los Angeles. These words and expressions have become incorporated to some extent in the speech of teenagers across the entire country. Mike's has been an avid rap fan since he was 12. His favorite groups include Ice-T, LL Cool J, Two Live Crew, Public Enemy, and Snoop Doggie Dog to name a few. He now listens to a combination of rap and "techno" music — a style which grew out of the DJ dance-hall scene and has a lot of cross-over appeal for rap fans.

Music is traditionally been one of the main pathways by which AAVE expressions pass into white culture. Today's teenagers appear to acquire AAVE vocabulary largely by watching music videos, buying rap music, and studying lyric sheets. Many white musicians who experiment with the rap and hip hop genres presumably acquire the style and format for their songs in the same way. Rage Against the Machine, The Beastie Boys, Beck and 3-11 are popular white groups at the moment which have employed rap music sounds and vocabulary in their music.

There is an historical precedent for the role that music has played in bringing blacks and whites together linguistically. The Harlem Renaissance brought together jazz legends such as Cab Calloway, Count Basie, Duke Ellington, and Louis Armstrong. MacNiel (1986) describes how whites traveled to Harlem to see these performers and were fascinated with black music. Much of Cab Calloway's "Jive talk" or the language of the jazz players which he repeated in his songs has passed into standard use. Expressions such as "groovy," "have a ball," "hip," "jam," and "riff" are just a few from Calloway's list (MacNeil 1986:224). White audiences and jazz reporters began employing these words and phrases to "show how smart and up to date they were" and little by little the general public followed suit (MacNeil 1986:224).

In the absence of the sort of social contact that is a prerequisite for language contact the question of how whites actually acquire AAVE is crucial and would appear to be explainable mainly in terms of the sort of musical crossover appeal discussed above. Music has certainly played a significant role in my informant's acquisition of AAVE as it does for other white, middle class suburban adolescents who have far less direct contact with African Americans than Mike. In recent years we have seen an increase in the number of 'black' sitcoms on television with large white audiences. In today's television dominated home this is perhaps just as much a transmitter of linguistic information as music. It will be interesting to see whether these programs will have any effect on the speech of white suburban dwellers in years to come.

Finally, recent films on black inner-city life have played a role in the transmission of AAVE to whites like Mike. He has seen all the recent so-called "Hood Films" — several times in some cases — which have emerged in recent years including "Straight out of Brooklyn" (1991), "Boyz'n the Hood" (1991), "Hangin' with the Homeboys" (1991), "House Party" (1990) "Straight out of Brooklyn" (1991), "Menace to Society" (1993), and "New Jack City" (1991). He also says he has seen Spike Lee's "Do the Right Thing" (1989) at least three or four times. These films have served to transmit views of inner-city ghetto life, in some cases a glamorized version, which white teenagers can selectively choose from to construct stereotypes about African Americans and hip hop culture. It would be impossible to objectively measure the effects each of these sources has had on Mike's acquisition of AAVE.

Suffice it to say that each has undoubtedly played some role in this process.

## 6. Ethnic Identity and Crossing[3]

I will now turn to the questions of what AAVE crossing reveals about a speakers' ethnic identity. It seems plausible that a white person could construct a black identity for him/herself or vice versa through a combination of language use, dress, friends etc. The issue of skin color would of course make it more difficult but perhaps not impossible for others to accept this identity. Given that such extreme cases of whites trying to pass themselves off as blacks are probably quite rare, it may be assumed that most teenagers who employ elements of black youth language are not trying to construct black identities for themselves. Rather they are trying to associate themselves with the qualities black youth language conveys. Labov 1972 observed that "if a certain group of speakers uses a particular variant then the social values attributed to that group will be transferred to that linguistic variant" (1972a:25). In the same vein Hewitt (1986) assesses the connection between creole and street culture as the reason for its appeal among white adolescents.

> The economic conditions in which black people have been historically placed in post-slavery societies, and particularly in urban contexts, have contributed to the emergence of a strand of—usually male—survival strategies and ideologies, traceable in many urban black cultures, encompassing a combination of toughness and quick wits potentially employed in the service of individual survival. The association of this street code with lower-class life and language has led to the establishment of the lower-class forms of black language as a resource for suggesting those very qualities and the 'role' associated with them ... the use of creole has exactly this reference for many young blacks, who

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[3] "Language Crossing"—a term coined by Ben Rampton (1995)—refers broadly to a range of sociolinguistic practices including the dominant outgroup use of prestigious minority codes, pejorative secondary foreigner talk and the notion of "marking" as a way of differentiating oneself from those being imitated as well as the white use of AAVE as a way of asserting an alternative identity (Rampton 1995).

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> associate the language with a distinctly oppositional street culture. It is for these reasons that, amongst some white adolescents, creole has come to be employed in a range of real and playful competitive situations. (1986:137)

Similar observations of the associations between black English and street culture in the United States have been made by Abrahams (1963), Kochman (1972), and Folb (1980). For many white teenage boys and some girls, employing elements of AAVE in their speech can create an aura of toughness that may help ensure their status in the school pecking order. In an inner-city setting this may actually be an environmental adaptation strategy as in Carla's case.

New York Magazine recently carried a lead article entitled "Teenage Gangland" [December 16, 1996] which describes how the sons and daughters of New York's elite join gangs or "crews", deal drugs, and steal to amuse themselves. Some of the city's finest private schools have witnessed the growing presence of so-called "prep school gangsters." Mike admitted knowing many of the young people interviewed in the article although he claims never to have been part of a gang or crew. The crews discussed in the article are made up of wealthy upper east side teens along side economically deprived youths from Harlem and the Bronx. Mike's involvement with these sorts of young people represented more than just a flirtation with gang culture as the severe physical scars he bears attest to. In most cases however it would be fair to say that the average middle class hip hop fan only plays with the idea of belonging to a crew or gang to be fashionable. The same could probably be said for the way AAVE crossing functions for most white teens — as a way to imbue themselves with the aura of a tough, urban stylish black teenager.

Rampton proposes three distinct levels of crossing employed by the young people in his study of adolescents in the South Midlands: minimal crossing characterized by the marking of "occurrences that deviated from the ordinary" through the use of "a small set of fixed terms and formulae"; more extensive but jocular crossing characterized by more random and innovative application of outgroup phonology and prosody; and extensive, serious crossing involving the use of weakly ritualized forms (Rampton 1995: 208-210;218). Granted Rampton is describing adolescent creole use in the U.K. which is arguably different in many ways from white AAVE use in the U.S., however the idea that crossing

LE

has many levels which index different sorts of motivations can I believe encompass what is happening in Mike's case as well. The motivations of most white crossers might best be summed up as "the desire to participate in the 'prestige' attach[ed] to black youth" rather than a desire to "be black" as Hewitt states (Hewitt 1986:94). These young people according to Rampton's model, would be described as minimal or jocular crossers. Thinking of crossing in terms of levels also provides a way to understand the how Mike employs and has employed AAVE in different situations and over time. Mike's use of AAVE generally varies depending on who he is addressing and in other cases what he is talking about. He employs significantly more AAVE phonology and lexicon with some friends than he does with others and much more so among friends than with family members or other adults in positions of authority. As mentioned earlier Mike does not ally himself with African Americans as strongly as he did a few years back which parallels the decrease in frequency with which he employs AAVE speech features. Nevertheless, he hangs onto some linguistic and lexical elements of AAVE/black youth language because of the high status it continues to hold among his peers. To use Rampton's model, Mike's formerly *extensive* crossing behavior would now be more accurately described as *less extensive* or *jocular* crossing.

## 7. Racism and Crossing

The fact that hip hop culture is a creation of African American young people makes some non-African American teenagers feel the need to claim it as a broad, multi-cultural style instead of a symbol of 'blackness.' As one presumably white youth wrote in to the WWW Hip Hop Style Page.[4] "Hey hey hey wut is goin' down with this shit???? Not all of us here are blacc[sic], alright." Many young whites feel they have the right to appropriate the hip hop look and language and that black adolescents who oppose them are racists. Smitherman writes about "wiggas" or "white niggas" who strongly identify with African American and especially hip hop culture. In Hewitt's words such young people may "fail to perceive the social and political aspects of the culture or fail to be sensitive to the issue of group boundaries" and may come across strong pressures from whites and blacks to stick to their own culture (Hewitt 1986:48).

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[4] Message posted on the "Tommy Hilfiger Fashion Research" web site at *http://www.streetsound.com/style/fashhiphop.html*.

Hewitt found that, at least in South London, white adolescents in predominantly white neighborhoods who identify strongly with black youth culture in their early teenage years often "encountered hostility from both sides [and] tend gradually to abandon the more overt signs [of allegiance to blacks] and settle down into their friendships..." (Hewitt 1986:49). At about age 16, and perhaps for some of the same reasons as his counterparts in South London, Mike began complaining about what he perceived as the racial exclusivity and anti-white attitudes of his African American classmates and of African Americans in general. He made these sorts of complaints in conversations with me as well as in the company of friends. In one interview he and his friends complained in particular about "anti-white skits" and overt demonstrations of black pride on black television programs such as "Def Comedy Jam."

*14a) (Age 16: 1996): Mike and friends (Funny, Joey, and Nikki) are discussing black racism against whites:*

Funny: And I also think that there's a lot of racism from blacks to whites.

Mike: YEAH, HELL YEAH, LIKE A LOT.

Funny: Like if you watch "Def Comedy Jam" or anything there always making cracks about whites but if a white guy gets up on the stage says a little joke I mean you're gonna have Reggie Jackson knocking at his door or Jesse Jackson you know... with the whole rainbow coalition. you know, I'm not racist, but I, I think there's a lot of...

Mike: And like I hate the way, I hate the way they they completely separate themselves. When you have that, like ...I'm glad you brought that up . "Def Comedy Jam", I hate that show. Like you see a freekin' like that's what I call a jigaboo, a person...((loud laughter)) no, no, no that's what I call a person, when they when they seclude themselves they're they're just as bad, that's that's what I call BOOM, a bastard, because they go up there and they have a "Black as Hell" white shirt, white sweat shirt and they're up there "YO, MAN, YOU KNOW I WAS WALKIN' DOWN THE STREET THE OTHER DAY AND I WAS WITH MY GIRL JUANITA ...—

Funny: —WIT MY FUCKIN' BITCH!!

> Mike: —YOU KNOW AND WIT JUANITA YOU KNOW I WUZ JUS CHILLIN' YOU KNOW, MY BLACK GIRL, MY BLACK PRINCESS, MY BLACK...—
>
> Funny: —MY BITCH!!
>
> Mike: —AND I EMPHASIZE TWENTY MORE TIMES THAT SHE'S BLACK ((laughter))TO MAKE SURE EVERYBODY KNOWS THAT SHE'S BLACK ((laugher)) BECAUSE I DON'T WANT ANYONE TO THINK I HAD TO DO WITH WHITE."
>
> Funny: Yeah, yeah!!
>
> Mike: YOU KNOW, that's exactly how they are.

The exchange is marked by exaggerated imitation of AAVE by both boys. They resent what they perceive as boundary maintenance on the part of African Americans they feel is targeted especially at them. The tone of the conversation is mocking and bitter. Funny in particular makes a point of inserting the derisive term "bitch" to mean "girlfriend" in his marked imitation of an imaginary African American speaker. Mike's stressed repetition of the word "BLACK" parodies what he perceives as the show's racial exclusivity. Teenagers like Mike and his friends have bought into African American and particularly hip hop culture in many ways and feel particularly resentful when they are "told" they are not wanted. Later on in the conversation, the boys complain about being victims of black on white racism.

*14b)*

> Mike: Yeah, I mean ((click)) I have a lot of friends that are of other races and I don't care but once I hear somebody say you know "OH, WORD-UP, BLACK PRIDE" then they like become another thing for me. Then I see 'em then I see 'em different, then I see 'em much different.
>
> Funny: Or "white boy", I hate that shit, when they say "white boy" to me, there's like if I walk around and like um you know in a nice outfit "hey white boy" just cause I'm in a nice or or because I'm in a private school, this is my favorite thing, or I, I've gotten into arguments like you know, it's come close you know? You, you remember "oh white boy" you know "from a private school" you know...

The indignation the boys felt about what they perceive as black racism was also directed towards whites who "want to be black." During the same group session Mike and his friends made mention of a "Yorkville[5] crew" in response to a question about "wannabes."

*14c)*

> Funny: You see, NAH, I'm sayin' you see a lot of kids who live down here [Yorkville] who wished they lived there [Harlem]...you see a lot of kids running around here who look like they want to be up from up there you know...like you see like all these like...
>
> Joey: They go around like these these these these rich, white kids go around robbin' kids. I mean it's like so stupid...and they only rob kids when they have like 15 or 20 kids in a gang.
>
> Mike: They like they like have like their own 'crew' 'n shit and like every, and then every night like every other night they all hang out like all 200 of 'em by of the Metropolitan Museum at night time.

Funny mentioned that friends of his who really come from the Bronx know of this Yorkville "crew" and are particularly critical of its members.

*14d)*

> Funny: ...they [Yorkville Crew kids] wouldn't step foot over like, you know they wouldn't they're like set foot into Harlem but they try to act like their from Harlem you know. I, I mean last year he got a go round and like "YO DIS IZ YOKVILLE, DIS IZ YOKVILLE."
>
> Joey: Yeah, they're like "GET OUT OF YORKVILLE MUTHAFUCKA."
>
> Funny: [continuing the imitation] "WEST SIDE, EAST SIDE WE AT WOH (war), WE AT WOH."

Funny and Joey both parody the Yorkville kids' speech by trying to affect AAVE pronunciation. (The "Yorkville crew" kids are predominantly white.) Funny employs phonological markers such as the stop pronunciation of voiced 'th' as in 'this', post-vocalic r-lessness in 'Y*or*kville' and 'w*ar*', and even copula deletion in the very last phrase: 'WE [ ] AT WOH.' This is particularly noticeable since neither Funny nor Joey employs many AAVE features in his own speech aside from a few lexical items. Bucholtz (1996) cites similar examples in which white teens "mark black" in order to parody the speech of other whites who routinely employ AAVE speech patterns. Mike on the other hand *does* employ quite a bit of AAVE phonology and lexicon in his everyday speech. His imitation of the Yorkville crew is quite different from that of his friends as will be seen below. Mike claims "[the Yorkville Crew kids] don't like black kids actually." Funny agreed saying, "this special group around Yorkville doesn't even like black kids." When asked whether these kids talk in a special way, Funny replied:

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[5] Yorkville encompasses the upper east side of Manhattan from Central Park to East End Avenue from roughly 60th Street up to 86th Street; demographically it is predominantly white and upper class.

*14e)*

Funny: Well they have the homeboy handbook so. I guess they just follow...

Mike: Awright, awright [with a heavily affected white accent] WHEN I'M STEPPING TO SOMEBODY...

Funny: You know they like practice in front of the mirror, pull their pants down to their knees, I don't know.

Mike's comments in this exchange are particularly interesting. When imitating the Yorkville crew kids' speech he goes out of his way to use very exaggerated 'white' pronunciation. In this way he effectively sets himself apart from the 'wannabe' types by situating their language in a white context. His use of the expression "stepping to somebody" (to act aggressively in a way that would lead to a fist fight) alludes to its markedness as a 'black' term and he implies that for a white peer to use this word is somewhat ridiculous.

It is also interesting to note Mike's behavior during this discussion. His use of hip hop expressions and AAVE phonology is notably lower than in sessions with other groups of friends. He was hesitant to provide direct information about the "Yorkville crew" and seemed somewhat uncomfortable that the subject had come up at all. When I asked whether any of the boys knew the specific names of "crews" in Yorkville, all eyes went toward Mike who said "why y'all lookin' at me for?" Later he gave some absurd, fictitious names such as the "first avenue mob" and "heavy fat losers" to the great amusement of his friends. His behavior during the interview suggests he was somewhat ashamed that these

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particular friends would associate him with one of these groups or think he had been involved with the Yorkville Crew at one time. What all this points to is that Mike appears to have undergone an ideological shift away from identifying with African Americans but also that he makes efforts to adapt his ideas and beliefs to the group he is with. In sessions with other groups of friends he uses markedly more hip hop vocabulary and AAVE phonology and experiments with a 'Spanish' identity through code-switching as discussed in the following section.

## 8. Code-Switching into Spanish

Rampton's (1995) discussion of Punjabi crossing shows that whereas in-group use of Punjabi constitutes a normal code-switching situation, out-group use is generally "restricted to swear words, terms of deprecation, perhaps a few numbers, a very small selection of stock formulae and one or two nonsensical pseudo-Punjabi inventions..." (Rampton 1995:43). For many non-Asians who used Punjabi, "swearing was a valued part of the local multiracial inheritance and figured in a range of the entertaining activities in which they had been participating with bilingual friends for a number of years..." (Rampton 1995:192). As a discourse strategy it symbolized "inter-ethnic unity" between Asians and non-Asian peers (Rampton 1995:192).

Mike is a bilingual English-Spanish speaker although his mother complains about his accent and grammar. He was born in New York City where he has lived his entire life but at times he plays up his 'Spanish' identity around certain friends. The work of Gilroy (1987:190;217) and Jones (1988:139;218) describes hip hop's frame of reference as primarily black but more open to Hispanic, white and Asian participation. Mike is able to cash in on the non-specific New York City use of the term "Spanish" to designate any person who speaks Spanish, (usually a Puerto Rican or Dominican) or anything pertaining to Hispanic culture rather than someone or something specifically from *Spain*.

Although his cultural allegiance to Africans Americans appears to have waned, Mike still enjoys a certain status among his peers through his association with 'Spanishness.' In one of the group sessions there are several examples of code-switching into Spanish among Mike and his friends. All the young people present in the session were white — with perhaps the exception of one of the girls, "Mary," who is half Italian half Peruvian and speaks

Spanish fluently — and middle class. At one point Mike is carrying on a conversation with Mary in Spanish but most of the other instances of Spanish use involve emblematic code-switching such as the insertion of tags and expletives. One of the boys, "Gus" employs "diablo" from time to time as an expletive and we hear Mike exclaim, "Ay, coño!" several times throughout the game. Further along into the card game, Gus says, "Give me DOS cartas." The other kids follow suit, requesting cards in Spanish for the next several minutes. "Give me tres cartas, yo" says another non-Spanish speaking girl.

A closer examination of the lexicon of hip hop shows the influence of urban language contact between blacks and Hispanics. Some terms such as "liña" for a "line" of cocaine, and "stilo," a truncation of the Spanish "estilo" (style) have entered the hip hop vocabulary in part because of the influence of Hispanic rappers like La Raza and others. According to the "Internet's Totally Unofficial Rap Dictionary," the expression "vato" was introduced by Kid Frost and means "homeboy" (*nielsj@sci.kun.nl*;18 April 1996). Although it would be premature to make such a conclusion on the basis of this study, Spanish may well have some of the same symbolic resonance as AAVE for many young people in urban areas. Both are associated to a degree with the tough, oppositional street culture so alluring to white middle class teenagers although AAVE clearly has much higher status and exposure.

## 9. Divergence/Convergence Debate

The convergence/divergence panel at NWAVE XIV (1985) addressed the question "Are black and white vernaculars diverging?" Contrary to what one would expect after decades of affirmative action and efforts at desegregation, evidence was presented at the conference suggesting that blacks as well as whites in Philadelphia are striking off in different directions linguistically. For African Americans in particular, this divergence is due in part to increasing social segregation. In Labov's words, "there is no doubt that the divergence that we have witnessed on the linguistic front is symptomatic of a split between the black and white portions of our society" (NWAVE XIV Panel Discussion:10). As to the social significance of this reported divergence Labov and Harris (1986) state that sound changes may stand for "symbolic claims to local rights and privileges," such as jobs and housing which blacks and other minorities are often shut out from (1986:18). If there is truth

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to the claim that divergence is a widespread phenomenon then the practice of AAVE crossing among adolescents raises some interesting questions. AAVE crossing may represent a trend *towards* convergence of the speech of young people from various ethnic backgrounds — an exception to the reported pattern of divergence between black and white vernaculars in the population at large. To the extent that the use of hip hop language is becoming more and more common in the speech of young people across the country, this convergence may be quite wide-spread. There is also a possible parallel to Rampton's (and Hewitt's) "youth code," accessible by young people of many ethnic and social backgrounds which, although heavily influenced by creole, is not perceived as an appropriation of black youth language. The same may be happening in the U.S. although there appears to be more sensitivity surrounding the issue of appropriation.

## 10. Conclusion

The phenomenon of whites crossing into AAVE is hardly new. The covert prestige attached to the language, the music and fashions of black youth culture have long provided and continue to provide a constant source of inspiration for teenagers in this country and all over the world. The term "crossing" however is new and provides a useful distinction for this sort of out-group linguistic practice. Although much more limited than Rampton's or Hewitt's exhaustive studies of out-group language use in Britain, this paper attempts to build on the idea of crossing — this time in an urban, North American setting — in an attempt to understand the mechanisms and motivations for this sort of linguistic behavior. It is impossible to make sweeping generalizations from one case, but it is my belief that AAVE crossing among young people in the United States is very widespread. Paradoxically this is going on against the backdrop of raging battles in the media and educational establishment about whether or not AAVE or "Ebonics" is a legitimate rule-governed dialect or simply "slang" and "broken English." The fact that black youth language enjoys so much prestige among teenagers might be interpreted as a trend towards legitimization of AAVE in mainstream white society. Unfortunately this does not appear to be happening. Young whites most often embrace features of AAVE in order to participate in the prestige of hip hop and black youth culture or in other cases to emphasize their own ethnic distinctiveness rather than as a conscious effort to ally themselves with African Americans.

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World Wide Web Sites:

*http://www.sci.kun.nl:80/thalia/rapdict/dict_en.html*(Galaxy); *http://www.streetsound.com/style/fashhiphop.html*.

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# Modeling contact-induced language change

Naomi Nagy

## 1. The Problem

Linguists since the Neogrammarians have stressed the need to examine social factors in the study of language change. However, there is still little consensus regarding the roles that these factors play-- or even what the factors are.[1] Eckert (1989:254), for example, argues explicitly that gender roles differ over time from community to community. Implicitly, there is the suggestion that any social factor may have different effects in different communities and at different times. My question is, would that really be the case if everything else could be held constant?

While many extensive and detailed studies of the interaction of social and linguistic factors have been conducted, each has been undertaken in an independent framework, making comparison across cases difficult or impossible. The root of the problem lies in the fact that, in general, linguists who devote themselves to detailed analysis of particular contact situations do not also propose useful wide-ranging principles for the field as a whole. On the flip side, theoretical linguists who write grand treatises on How Language Changes do not generally report detailed facts regarding particular situations of language change. My aim here is to show how this gap can be bridged.

In order to see whether social factors actually have constant effects, a uniform multi-dimensional approach is necessary. In this paper, I outline a proposal for a large-scale research project to do that in the field of contact-induced language change.

Since Labov's early work, sociolinguists have used a similar paradigm to analyze spontaneous change and variation, calling upon a core group of factors relevant to speakers' social identities, experience and position within their communities. When these factors don't account for all of the variance, other factors such as ethnicity, level of education, and network membership may be added. Such sets of core and peripheral social

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[1] This is a substantially revised version of Nagy (1996: Ch. 2).

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factors are not recognized in the field of language contact as shown by Table 1.

Table 1 gives an overview of the situation, showing which factors are considered in a quasi-random sampling of 15 case studies. My goal is to show the range of factors which have been called into account, rather than to criticize particular scholars for having ignored certain aspects. My analysis would not be possible if this work had not been completed.

From Table 1, the disparity of social factors reported is evident. In only 15 studies, 26 different factors were cited. On average, each study lists 7 social factors, and no study lists more than 11 of the 26. More than half the studies that I had originally (randomly) selected had to be excluded because effects of social factors were not reported at all.

*Abbreviations used in Table 1*

| | |
|---|---|
| IC | Factor which measures intensity of contact |
| 1 | Marathi/Hindi contact in Nagpur, India (Pandharipande 1982:97) |
| 2 | Brahui-Balochi contact situation (Indic) (Thomason & Kaufman 1988:70) |
| 3 | Uzbek-Tadzhik contact in Soviet Union (*ibid* 70-1) |
| 4 | French and Norse influence on English (*ibid* 263-303) |
| 5 | Asia-Minor Greek (*ibid* 215-222) |
| 6 | Uralic interference in Slavic and Baltic (*ibid* 238-250) |
| 7 | Ma'a (*ibid* 223-227) |
| 8 | Chinook Jargon (*ibid* 256-262) |
| 9 | Michif (*ibid* 228-232) |
| 10 | Mednyj Aleut (*ibid* 233-237) |
| 11 | Afrikaans (*ibid* 251-255) |
| 12 | Norman French & medieval English (van Coetsem 1988:129-135) |
| 13 | Afrikaans (*ibid* 129-135) |
| 14 | Korlai Portuguese creole in India (Clements 1992:41-52) |
| 15 | Basque, Gascon, and French interaction (Haase 1992:343-4) |

*Table 1. Community level factors cited in accounting for variation*

| | IC? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Geographic** | | | | | | | | | | | | | | | | | |
| Geographic domain | y | x | x | | x | | x | | x | x | x | x | | | x | | 9 |
| Geographic overlap | y | | x | | | | x | | | | x | x | | | x | | 5 |
| Contributing geog. | y | | | | | | | | | | x | | | | | | 1 |
| **Political** | | | | | | | | | | | | | | | | | |
| Political domain | | | | | x | | | | x | | x | | | | | | 3 |
| Pol. relation of grps. | y | | x | | x | x | | | | | | x | x | | x | | 6 |
| Other grps. present | y | | | | | | | | x | | | | | | | x | 2 |
| **Demographic** | | | | | | | | | | | | | | | | | |
| Size of dom. group | y | | | | | x | | | | | x | | | | | | 2 |
| Size of subord. grp. | y | | x | | | x | | | | x | x | | | | x | | 5 |
| Both sexes present? | | | | | | | | | | | x | x | | | x | | 3 |
| **Chronology** | | | | | | | | | | | | | | | | | |
| Period of influence | y | | | | | | | | | | | | | x | | | 1 |
| Period of contact | y | | | | x | x | x | x | x | x | x | x | x | x | x | | 11 |
| **Language use** | | | | | | | | | | | | | | | | | |
| Biling. in dom. group | y | x | x | | | | | | | | | | | | | x | 3 |
| Biling. in sub. group | y | x | x | | | x | | | | | | x | x | | | x | 6 |
| Unspec. biling.[2] | y | | | x | x | | | | x | | x | | | | | | 4 |
| Other lgs. spoken | y | | | | x | | | x | x | x | | | | x | | | 5 |
| Ongoing shift | | | | | | x | | | | x | | | | | | x | 3 |
| Domains of use | y | x | | | x | | | | | | | | x | | | x | 4 |
| **Cultural** | | | | | | | | | | | | | | | | | |
| Intermarriage | y | | x | x | | | | | | x | x | x | | | x | x | 7 |
| Common culture | y | | | | x | | | x | | x | | | | | x | x | 5 |
| Common religion | y | | | | | x | | | | | | | | | x | | 2 |
| Common work/econ. | y | | | | | | | | | | x | | | | | x | 2 |
| **Misc.** | | | | | | | | | | | | | | | | | |
| Cause of contact | | | | x | | | | | | | | x | x | x | x | x | 6 |
| Personality | | | | | | | | x | | | | | | | | | 1 |
| Standardization | y | | | | x | | | | | | | | | x | | x | 3 |
| Lg. attitude | | x | | | x | | | | | | | | x | x | | x | 5 |
| Lgs' official status | y | | | | | | | | | | | | x | x | | | 2 |

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[2] Author doesn't note which group has bilinguals in it.

## 2. Motivation for Developing a Method of Computing Social Factors

This project is a response to numerous calls for structured analysis of social factors involved in contact-induced language change, which go back at least to Kiparsky (1938) and Coteanu (1957), cited in Thomason & Kaufman (1988:35). The importance of examining social factors in contact and shift situations has been highlighted in recent work by Mufwene (1996), Mougeon et al. (1985), and Siegel (1995), *inter alia.*

Mufwene (1996), for example, argues, contra Bickerton (1981) that the level of integration (read "intensity of contact") of two populations in contact is more significant than the raw relative sizes of the community. In order to evaluate such competing claims, we need a metric of comparison, rather than just lists of examples.

I respond, in particular, to Thomason & Kaufman's (1988:3) challenge in their book on contact-induced language change. Their goal is "a unified framework... based on substantive claims and a systematic historical investigation of all kinds of contact-induced change." A refrain which is repeated throughout the book is that social factors are very important in determining what types of change occur in a given situation. They write,

> From Meillet, Sapir, and the Prague linguists to Weinreich to the most modern generativists, the heirs of Saussure have proposed linguistic constraints on linguistic interference... And they all fail. As far as the strictly linguistic possibilities go, any linguistic feature can be transferred from any language to any other language; and implicational universals that depend solely on linguistic properties are similarly invalid (*ibid* 13-4).
>
> ... social factors are so important... that any inhibiting force exerted by linguistic factors would probably be overridden (*ibid* 53).

However, since Thomason & Kaufman are not sociolinguists, they leave the matter of examining social factors aside and hope that someone else will tackle it, as can be seen from the following quotation:

> the notion [of cultural pressure] is of course vague; making it more precise–i.e., giving relative weights to various kinds of social factors in an effort to predict structural borrowing–is a task that falls into the domain of the sociolinguist rather than the historical linguist, and is therefore beyond the scope of this book (*ibid* 77).

## 2.1. The Need to Analyze Social Factors

Taking up this challenge, I propose a methodology which allows us to find answers to questions of the following type, which appear to be at the forefront of linguistic curiosity:

- What types of change occur in what type of speech community?
- How can each type be characterized?
- What is/are the source(s) of a change?
- What factors encourage or discourage change?
- Where does the change begin?

Denison (1980:335) poses this series of further questions which beg for a codification of contact situation types:

> Why will one community cling to its language under circumstances and against odds which lead an apparently comparable case to rapid linguistic assimilation? Why will a seemingly stable and centuries-old state of plurilingualism sometimes give way to monolingualism within the space of a single generation? How do some languages, on the other hand, hang on to a precarious existence for decades–even centuries–after all rational calculation has proclaimed their demise or predicted the imminence thereof?

Although attempts have been made to answer such questions, many sociolinguistic analyses must include disclaimers noting that the results they have found may not necessarily be representative of a wider trend, because social factors may be different in other communities. Only by examining a large number of individual cases can it be determined if there *is* variation in the roles played by the social factors. The goal is to be able to predict what types of linguistic influence will be observed in a given situation, once the social factors are known. In order to move toward the position where this is possible, a more standardized approach is necessary.

Several linguists have begun to develop systematic relations between type of contact and type of language change. Prominent among them is Guy (1990), in which the types of language change are reduced to the following trichotomy: spontaneous (internal) change, borrowing (external cause, recipient language as agent), and imposition (external cause, source language as agent). Guy proposes corresponding social, psychological, and linguistic characteristics of change for each of these types, but does not report on particular contact situations in any detail.

## 2.2. The Need for a Standard Computation

Many texts refer to the social factors as if there were a standard way of computing them, and there is no such thing. In particular, there have been many proposals of "clines of borrowability" which suggest that in a given social context, certain linguistic elements are more likely to be borrowed than others. Thomason & Kaufman (1988) propose a borrowing scale in which the type and quantity of elements borrowed is determined by the type and quantity of contact between the communities, and they make a very strong prediction: that one can induce the social history of a situation through linguistic facts alone (*ibid* 225). They provide the scale shown in (1) but unfortunately leave the interpretation of their category names to the readers' imagination.

(1) Scale of borrowability (Thomason & Kaufman 1988:74-6)

casual contact
slightly more intense contact
more intense contact
strong cultural pressure
very strong cultural pressure

Trudgill (1989:229) and Pandharipande (1982:97) also make reference to intensity of contact without defining terms. Singh (1980) proposes that "[implicational hierarchies of borrowability] are valid for similar contact situations." These works neither address methods of computing intensity of contact nor provide definitions of the social factors mentioned, nor present metrics for determining similarity of contact situations.

Numerous problems arise when one attempts to construct a model for comparing the effects of these factors. First, factors which are mentioned in several studies may be examined and reported in diverse manners. Second, such factors may be perceived differently by different members of the community (not to mention by an outside observer). Third, many of these factors interact. The next section suggests a means to overcome at least the first and third of these problems.

## 3. How to Make a Model

This section describes how to construct a quantitatively-accountable model of contact-induced language change. The model of contact-induced language change is similar to the Labovian variable rule model, of the form:

(2) $I = ax + by + cz + \ldots$[3]

I, the intensity of contact for a particular individual, is determined by a number of factors {x, y, z,...} representing intensity of contact. {a,b,c,...}, the coefficients of each factor, must be determined by simultaneously solving the equations for many individuals. These values indicate the relative importance of each factor. See Sec. 5 for further discussion.

### 3.1. The Steps

In order to construct this model, three things are necessary. First, a finite set of factors must be established. Second, metrics must be developed to assign quantitative values to each factor. The third step is to combine the factors into an equation. A consistent set of factors must be developed before the metrics can be designed because, until there are more studies than factors, the factor values cannot be set. That is, if each study is seen as an equation where the sum of the effects of the social factors indexes the amount of contact-induced change, the set of equations cannot be solved until there are as many equations (case studies) as factors. Otherwise the equation set is underdetermined and the value of the factors cannot

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[3] The additive model is used as a first approximation and for ease of exposition. A logistic equation is more appropriate and is discussed in Section 5.

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be calculated algebraically.

A simple example involving only two factors and two studies illustrates this. Berruto's (1977) study of the shift to Italian from the Bergamo dialect reports a strong effect of sex, which the author finds surprising, because no such effect was noted in a national study of the Italianization of dialects. However, it turns out that Berruto's sample of females contains predominantly young *women*, while the sample of males contains predominantly old *men*, as seen in (3).

(3) Distribution of speakers in Berruto (1977)

| | Female | Male |
|---|---|---|
| Old | 16 | 23 |
| Young | 27 | 13 |

Thus, it may actually be an age effect, rather than a sex effect that was observed. In the bigger picture, the effects of 30 factors cannot be teased apart with fewer than 30 studies. This example highlights the necessity, pointed out in Kerswill (1994:115) of examining a large number of factors in each study, in order to avoid accidentally attributing a trend to the wrong factor because the right one was not examined.

Once the equations are derived, it will be possible to see which individual level factors are significant in most of the studies. This set will point to the set of factors which account for influence at the community level. Adapting Bell's Style Axiom,

> Variation on [any] dimension within the speech of a single speaker derives from and echoes the variation which exists between speakers (Bell 1984:151).

## 3.2. Individual Level Factors

Studies since Labov et al. (1968) have shown that it is possible to assign weights to factors at the individual speaker level and thus obtain an accurate description of the variation within a community. Because a finite corpus of speech can be recorded from a representative sample of speakers, and then coded for both linguistic environment and social attributes of the individual speaker, it is possible to develop equations relating the weights of each of the factors to the overall variable distributions.

Therefore, rather than directly attacking the tangle of community level factors listed in Table 1, I examine the more constrained set of factors that show influence at the individual speaker level. Table 2 summarizes the individual level factors considered in 15 studies. More overlap is seen in this set of fators than in the factors called on to account for change at the community level. The factors cited most frequently are at the top of the table.

From this analysis of 15 case studies which examine individual level factors, we see that there is a much more constrained set of factors which are repeatedly called upon for the analysis of contact-induced change at the individual level than at the community level. Although at first blush, 23 factors for 15 studies seems to predict a huge number of factors being called into account if one were to look at *all* the studies that have been done, this is not the case. Rather, there is an asymptotic function relating the number of studies to the number of factors reported, and the number of factors grows more and more slowly as more studies are examined.

*Abbreviations used in Table 2*

1 Italian influence on Catanzaro dialect (Saladino 1990)
2 Genovese & other dialects (Còveri & De Nardis 1977)
3 Grico, Romanzo, & Italian (Sobrero & Romanello 1977)
4 Bergamasca-Italian usage in Bergamo (Berruto 1977)
5 Effects of 3 "standard" Italians (Galli de Paratesi 1977)
6 Italian-Croatian contact in Bosnia (Corrà 1980)
7 Spanish influence on Ucieda dialect (Holmquist 1988)
8 Shift from French to English in Ontario (Mougeon, Beniak & Valois 1985)
9 German/Hungarian shift situation in Austria (Gal 1978)
10 Transfer of accent to British English (Tahta, Wood & Loewenthal 1981)
11 Scots Gaelic to English shift (Dorian 1994a)
12 Urban and rural dialects in contact in Bergen, Norway (Kerswill 1994)
13 Honduran Spanish in contact with Northern Mexican Spanish (Amastae & Satcher 1993)
14 Spanish influence on Limon Creole (Herzfeld 1980)
15 Mexican-American bilinguals in Los Angeles (Silva-Corvalán 1994)

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*Table 2: Individual level factors cited in accounting for variation*

| Indiv. factors | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| age | x |  | x | x |  | x | x |  | x | x | x | x | x | x |  |
| sex |  |  | x | x | x | x | x | x | x | x | x | x | x | *[4] |  |
| occupation |  | x | x | x | x |  | x | x |  |  |  | x | x | * |  |
| status | x |  | x |  |  |  | x |  | x |  |  |  | x | x |  |
| domains of use |  |  |  | x |  |  |  | x | x | x |  |  |  | x |  |
| neighborhood/ network |  | x |  |  | x |  |  | x | x |  | x | x | x |  |  |
| amount of school | x | x |  |  | x |  |  |  |  |  |  |  |  | x |  |
| contact w/L2 |  |  |  |  |  |  |  |  |  | x |  | x | x |  | x |
| L1 |  |  |  | x |  |  |  |  |  | x | x |  |  |  |  |
| parents |  | x |  |  | x |  |  | x |  |  |  |  |  |  |  |
| urban/rural |  |  |  |  |  |  |  |  | x |  |  |  |  | x |  |
| political leaning |  |  |  |  |  |  | x |  |  |  |  |  |  | * |  |
| animal ownership |  |  |  |  |  |  | x |  |  |  |  |  |  |  |  |
| race/ethnicity |  |  |  |  |  |  |  |  |  |  |  |  |  | x |  |
| amount of travel | x |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| intermarriage |  |  |  |  |  |  |  |  |  |  |  |  |  | x |  |
| proficiency |  |  |  |  |  |  |  |  |  |  | x |  |  |  |  |
| length of res. |  | x |  |  |  |  |  |  |  | x |  |  |  |  |  |
| # lgs. spoken |  |  |  |  |  |  |  |  |  | x |  |  |  |  |  |
| age of L2 acq. |  |  |  |  |  |  |  |  |  | x |  | x |  |  |  |
| attitude toward lg. |  |  |  |  |  |  |  |  |  |  |  | x |  |  |  |
| pressure to change |  |  |  |  |  |  |  |  |  |  |  | x |  |  |  |
| media contact |  | x |  |  | x |  |  |  |  |  |  |  |  |  |  |
| TOTAL (23) | 4 | 6 | 4 | 5 | 6 | 2 | 6 | 5 | 5 | 8 | 5 | 7 | 6 | 7 | 1 |

For the individual level factors, on average, each study cites 5 factors, out of the 23 listed (over 1/5), showing more consensus than the community-level factors in Table 1. The difference between these sets of factors is illustrated in Figure 1, which shows the average number of factors added by each study examined, averaging over 1,000 different possible orderings of the factors (of the 15! or 23! possible orderings).

The solid curve represents the function for these individual level factors. The dotted curve represents the function for the

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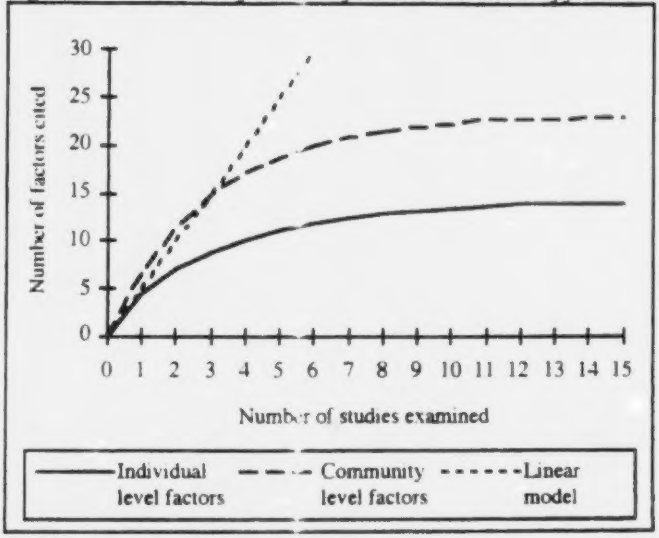
[4] Author did not report on the factors marked by an asterisk, but indicated that he wished he had.

*Figure 1. Correlation of number of studies to number of factors*



community level factors. (Factors cited by only one study are excluded.) The dashed line represents a hypothetical function linearly relating the number of factors to the number of studies, a situation in which the set of factors is not constrained. Because, in contrast, the actual curves can be modeled as the asymptotic function shown in (4), the model has valuable predictive powers.

(4) $$F = F_0\left(1 - e^{\left(-\frac{N}{N_o}\right)}\right)$$

The pattern to note is that, after the first nine sample points, the curves rise very slowly, predicting that no matter how many more studies are added to the pool, the total number of factors will not rise above the asymptote *Fo*, which equals 14.0 for the individual level factors, contrasted with 23.2 for the community level factors.

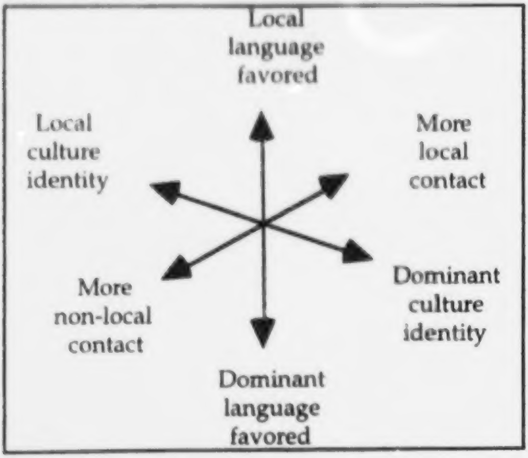
### 3.3. Combining the Factors

In order for the field to advance, all sociolinguists making reports on contact-induced language change ought to report on the same set of ~15 factors. Until that occurs, there are too many unknowns in each case study. Factors which haven't been reported on in a given study may very well influence the amount of contact-induced change which occurs. If significant factors are ignored in the equation representing a particular case study, values will be misdetermined for the factors that are reported.

Even 15 factors may be too many to efficiently analyze. To simplify matters, the individual level factors can be grouped by type as in (5). These three subsets can be seen as three axes along which speakers are aligned to show their individual propensity to adopt features of the majority language into their own speech, as shown in Figure 2.

Conspicuously absent are the commonly examined factors age and sex. The strongest version of my proposal would claim that sex- and age-correlated differences are reflections of behavioral differences across generations and genders: there is no need to reify these factors if there are more general behavioral patterns which account for the same effect (thanks to M. Meyerhoff (p.c.) for pointing this out).

*Figure 2. Factor groups for intensity of contact*



(5) *Types of IC factors*

Linguistic factors
Language learned first
Proficiency in each language
Number of languages spoken
Parents' language

Amount of contact
Length of residence in community
Amount of daily contact with dominant language speakers
Amount of travel outside the local community
Intermarriage
Age of second language acquisition
Domains of use of each language
Media contact

Cultural identity
Neighborhood/network membership
Urban vs. rural residence
Occupation
Status/prestige within each of the two cultures
Race/ethnicity
Political leaning
Ownership of particular types of animals
Media contact
Amount of schooling
Parents
Domains of use of each language

The position along these three axes shows a person's overall level of intensity of contact (IC). In every study, all three axes must be taken into account, but not every factor listed in Table 2 will be pertinent in every study. There must be some latitude in which particular factors are examined in any one study, but factors representing each of the three axes must be included. This follows Kerswill's (1994:49) program of a subjective "selective" strategy of choosing social factors, as opposed to an all-inclusive strategy: only social factors which are "of importance" are analyzed.

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## 3.4. Expected Effects of Contact Factor Groups

The first factor group (or axis) represents the linguistic profile of the speaker, with respect to the languages spoken in the commuity. Since the language learned first is generally the language of one's family and closest friends, as well as being the language used for the longest period of time (except in cases where people switch to an L2 and stop speaking their L1) it will index IC. In most cases, this will be identical to the parents' language, so they will have similar effects. However, Kerswill (1994) points out that one's first language, or parents' language may not be the most commonly used, or most proficient language for all speakers, especially for immigrants. Therefore, the following factor must also be taken into account. Proficiency in each language may have a different effect depending on whether the source language was learned for affective or instrumental purposes: if affective, the speaker may use more of its features in the L1. If it is learned only for instrumental purposes, it may have less effect on the L1. Number of languages spoken on a regular basis indexes IC in that, the more languages one speaks, the less time one spends speaking each of them.

The second factor group (or axis) represents the degree of identity with the different cultures in the community. The effect of identity with the local culture has been examined in Labov's (1963) study of Martha's Vineyard, where factors such as occupation, ethnicity, and neighborhood correlate to degree of acquisition of a spontaneous change in progress. Such factors are also relevant in contact-induced change, where there is a direct relation between these factors and the amount of contact with the source language.

Neighborhood or network membership indexes cultural identity, in many cases even defines it: the people one is in frequent contact with define one's culture, and with it, one's language. More particularly, cultural identity is partially defined by status within the (local and dominant) community so this factor also indexes IC. The urban/rural factor indexes IC along the cultural axis: urban inhabitants generally identify more with the dominant culture and are more likely to have regular contact with the dominant language. Occupation also indexes IC along the cultural axis as described in Gal (19787) and Holmquist (1988). In any community where race is a salient factor for the speakers in determining their social networks, it will play a role in the degree of contact between linguistic groups. Political leanings were shown to index IC along the cultural identity axis in Holmquist (1988). Likewise, animal ownership as a measure of both wealth and attachment to the traditional lifestyle is correlated to IC. The choice among media forms indicates which aspects of culture one identifies with. Amount of school indexes IC either if the school serves speakers of both languages or if it serves one linguistic group in the language of another. Either way, more school means more contact with the source language. Kerswill (1994) notes that "a high level of education is likely to breed a greater tolerance of non-standard speech as well as greater self-confidence." Finally, parents influence one's cultural identity in numerous ways and so any factor correlated to parents' linguistic patterns may also correlate to their children's.

The third factor group (or axis) represents the amount of contact an individual has with the languages of the community. Length of residence in the community is a direct correlate of the amount of contact with the dominant language: newer arrivals (including young children born in the community) will have had fewer opportunities to hear the dominant language and would be less likely to exhibit any direct influence of the dominant language in their own speech.[5] Amount of daily contact has a similar effect: the more speakers are in contact with a dominant language, the more their language will be influenced. Age of second language acquisition also contributes to the overall amount of contact with the second language. Amount of travel and intermarriage index IC, along the amount of contact axis, in obvious ways. Distribution of domains of use indexes IC along all three axes. The more domains a language is used in, the more likely it is to be in contact with another language. Also, the more domains one uses the local language in, the more likely one is to identify with the local culture. Third, the more domains a language is used in, the more active it is and thus, the more susceptible to change. Another possible effect is demonstrated in Dorian (1994b): much variation is seen in Scots Gaelic even when it is used only in a very restricted set of domains. Finally, media contact indexes IC: exposure to media in the majority language entails that much more contact with the dominant language.

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[5] It is possible that this would not show up as a correlate to the amount of linguistic influence if the speaker is in contact with other speakers who are, in turn, in contact with the dominant language. In that case, the direct influence of the intermediary speakers would be passed on to the more isolated speakers. Such an effect is shown in Chapter 9, where there is no correlation between amount of Italian influence in the lexicon and age.

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## 4. Metrics

Once a set of relevant factors has been determined, metrics must be designed for each factor so that a value (coefficient) can be objectively assigned to each factor for each speaker. Several attempts have been made at designing metrics for some factors, and I will not go into them here. Relevant references include Kerswill (1994), D. Sankoff & Laberge (1978), and Nagy, G. Sankoff & Moisset (1996).

## 5. The Model

Once metrics are developed for the pertinent social factors, they can be combined in an equation of the form shown in (6).

(6) $I = ax + by + cz + \ldots$

$I$ represents intensity of contact for the individual speaker. $\{x, y, z\ldots\}$ are the weights of the factors contributing to intensity of contact, such as attending school in the source language or marrying a member of the source language community. Their values can be empirically obtained by a maximum likelihood estimation technique (e.g., the Varbrul package). $\{a, b, c\ldots\}$ are constants indicating the importance of the factor group in a given community. Their values are obtained by simultaneously solving equations for (at least) as many individuals as there are social factors.

Once the values of the coefficients are obtained for many different communities, they can be compared. If the model is to have predictive power, the values of {a,b,c,...} must be similar across communities. Otherwise, we learn that different parameters are of different relative importance in different communities.

This method differs slightly from traditional variable rule analysis. This is seen by comparing the equation in (6) to the traditional form of a variable rule, as shown in (7). Each term such as $p_i$ in (7) corresponds to a term like $ax$ in (6).

(7) $p = p_o + p_i + p_j + p_k \cdots$

By dividing each term into a coefficient and a variable, it is possible to separate the factor weight within one community from the overall effect of the factor across communities. Only in this manner can the coefficients be compared across communities. This distinction is not possible using the current model of GoldVarb, as statistical comparison of factor groups across different calculations (for different communities) is not possible.

One further modification to the model is necessary. Although the additive model is appealing due to its intuitiveness, it has been rejected for variable rule analyses due to technical difficulties. Rousseau & Sankoff (1978:62) propose the logistic model in its place. The form of this model that corresponds to the additive model show in (6) is given in (8).

(8) $$\frac{I}{1-I} = \frac{a}{1-a}x \times \frac{b}{1-b}y \times \frac{c}{1-c}z \times \ldots$$

In order to have greater comparability across studies, the factors may be collapsed into three parameters corresponding to the three axes in Figure 2. This is an appropriate simplification only if there is high correlation among the factors within each of the three subgroups listed in (5).

## 6. Summary

This paper has shown how to quantitatively analyze individual level factors relevant to understanding contact-induced language change. Focusing on intensity of contact as the primary correlate of contact-induced change, I have proposed that, in order to make progress in the study of how contact induces language change, a number of comparable case studies is necessary. A paradigm for conducting such studies is set up, building on the factors which have been shown to be pertinent in earlier studies. A set of factors which should be addressed in all studies is established, and I have indicated how the factors are to be aligned along three axes. A method for combining the effects of these factors, using a logistic equation, is proposed. Once a set of such equations is available from a series of similarly conducted studies, the set of equations is, in principle, solvable, and sociolinguists will have a model of how

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social factors affect language change in contact communities. In combination with work on linguistic structure effects and typological difference effects, a complete model of language change will be within reach.

I close by requesting suggestions for data sets to be used for testing this model. Appropriate data would be collected from language contact settings where (a) there is a linguistic variable with a clearly defined innovative variant, and (b) data has been collected from a large enough sample of speakers to be able to examine each of the factors listed in (5).

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